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THE

PHILADELPHIA

MEDICAL MUSEUM,

CONDUCTED

BY

JOHN REDMAN COXE, M. D.

VOL. II.

Philadelphia:

PRINTED BY ARCHIBALD BARTRAM,

FOR THOMAS DOBSON, AT THE STONE HOUSE, No. 41, SOUTH SECOND STREET.—AND FOR SALE BY THE BOOKSELLERS IN DIFFERENT PARTS OF THE UNITED STATES.

1806.

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49434

PREFACE.

HAVING brought to a close the second Volume of the PHILADELPHIA MEDICAL MUSEUM, it is incumbent on the Editor, to return his thanks to those Gentlemen, who have so kindly added to its value, by their able and very useful communications.—Whilst he solicits a continuance of their favours, he may be allowed to remind the numerous Medical Characters who are spread throughout the extended regions of America, that in an undertaking of the present kind, in whose welfare all classes are in a greater or less degree interested; the exertions of an individual, require that aid which each at times is enabled to afford; but which is too generally limited to a small number of persons, whose industry should be a spur to the application of others.

The utility of periodical publications, is in no instance more evident, than in the Science of Medicine. The rapidity with which any improvement can be widely extended must be beneficial to all: it must then be a subject for congratulation, that the sources of improvement, are daily augmenting in the United States, in a manner seldom seen in a country so lately elevated into the rank of an Independent Nation.

The encouragement which the Philadelphia Medical Muſeum has received from the Practitioners throughout the Continent, whilſt it calls for the warmeſt acknowledgments of the Editor, ſo it will prove a powerful ſtimulus to a continuance of his exertions, which he promiſes ſhall be undiminiſhed, in hopes of rendering the work ſtill more worthy of their acceptance.

PHILADELPHIA,
March 1st, 1806.

TO

PHILIP SYNG PHYSICK, M. D.

PROFESSOR OF SURGERY

IN THE

UNIVERSITY OF PENNSYLVANIA.

DEAR SIR,

PERMIT me to dedicate to you this Second Volume of the Philadelphia Medical Museum, as a small testimony of my acknowledgments of the many obligations which you have conferred on me.

That you may long continue to exercise your talents in the practice of that Profession, of which you are so great an ornament; is the wish of,

Dear Sir,

Your sincere Friend,

And very humble Servant,

JOHN REDMAN COXE.

Philadelphia, March 1st, 1806.

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MEDICAL MUSEUM.

VOL. II.....No. I.

An Account of the good Effects of copious Blood-letting in the Cure of an Hemorrhage from the Lungs; in a Letter from the REV. DR. SAMUEL S. SMITH, *President of the College of New Jersey, to* DR. BENJAMIN RUSH.

Princeton, March 19th, 1798.

DEAR SIR,

AS the science of medicine is established on an induction of facts, well attested histories of the successful treatment of diseases must be singularly useful. It is with a view to add one case more to your useful collection, that I have been induced to give you an account of an uncommon hemorrhage with which I have been affected myself, and of my perfect recovery from it.

A certain weakness of breast, and tendency to hemorrhage, was hereditary on my mother's side of the family, whom I was supposed to resemble in constitution and countenance. Shortly after I was licensed to preach, I was thrown into a situation which required unusual exertions. I had often to address very large assemblies, at least three times in the week, and frequently every day. In consequence of these ef-

forts, at the end of about three years I began to raise small quantities of blood at the close of each discourse. This symptom continued to increase; and during nearly four years more, though I moderated my exertions, and made them much less frequent, I raised some blood at the end of almost every sermon that I delivered, and sometimes in considerable quantities. The spitting often continued in a less or greater degree for several days afterwards. I was at length obliged to intermit preaching entirely for the space of eight months, during which time I spent part of a season at the Sweet Springs in Virginia. I recovered a tolerable, though a delicate state of health. At this period I was removed to Princeton, where speaking to small assemblies, and in a chapel happily accommodated to favour the voice, I continued to preach, and to attend my other duties in the college, during two years, with increasing health and vigour. In the autumn of the year 1782, I suddenly broke a blood-vessel in my breast, as I was walking. A considerable quantity of blood issued from the wound; but by bleeding copiously at my arm the flux from my breast at that time was stopped. Nearly about the same time in the next evening I felt my pulse quicken, and an unusual tension growing on all my nerves, and, in a few seconds, the blood began to spout with great velocity through my mouth and nose; I was again bled largely twice in the course of the evening, from my arm and foot. The following evening a similar paroxysm returned, and the blood again spouted with great force from my mouth. The physician was sitting on my bed-side at the time; and when I perceived the quickening of my pulse, and that strange stricture coming, as it seemed to my feeling, on the whole system of the nerves, I gave him notice of it, and requested him to bleed me. He refused, and said so much bleeding would only tend to bring on an habitual hemorrhage by debility. I told him I would rather die bleeding from the arm than from the mouth. At last, when he saw the force with which the blood issued, and, in consequence of my earnest solicitations, he bled me again. I requested him to leave me his

lancet, and I would be anſwerable for my own life. This he reluctantly conſented to do. At this time two other phyſicians were called in, who bled me twice more the ſame evening before they could effectually ſtop the flux from my mouth. Next day I expectorated nearly a pint of clotted blood that had been lodged ſomewhere in the cavities of the lungs. Being now in poſſeſſion of a lancet, and appriſed by experience of the ſymptoms that preceded the return of my diſorder, I determined to anticipate it, and, when the phyſicians were not preſent, to open my own veins. This I did accordingly, whenever I perceived the ſymptoms I have already mentioned, which now recurred more frequently for four or five days. After that period they ſubſided. But I continued bleeding at the arm two, three, and four times in the day, till the tenth day. My intention was to take off the impulſe of the blood from the wounded part, to prevent an inflammation, and to give it time to heal. I may, perhaps, have bled myſelf oftener than was neceſſary. After purſuing this courſe, however, the flux of blood no more diſcovered itſelf from my breaſt. Two-and-thirty times I was bled in the ſpace of ten days, in my arms and feet, beſides what flowed from my mouth. And it was computed, from the dimenſions of the veſſels in which it was received, and other circumſtances, that I loſt, in that time, at leaſt two gallons of blood. Even in this reduced ſtate, ſo great was my apprehenſion of the hemorrhage in my breaſt returning, I continued to bleed at the arm twice in the week for ſome time, afterwards once in the week, and finally, once in a month during ſeveral months; though not in large quantities at each time. After the hemorrhage was entirely ſtopped, my fleſh waſted away for want of its proper nouriſhment in the blood, till not a muſcle could be perceived on any of my limbs—The ſkin appeared to be drawn almoſt cloſe to the ſkeleton—I ſpoke only in a whiſper—And I was not ſenſible of having forgotten myſelf for a moment in ſleep during ſix weeks. My complexion was tinged with a yelloviſh hue, and an acid ſo prevailed in my conſtitution, that with my tongue I have frequently curdled

a small bowl of milk. For more than three months I could not use bread, or any vegetable substance in my diet. I lived chiefly on beef liquor, soups, and white meats. I drank a little weak wine and water frequently; but after many trials, I found porter as a drink agree best with my stomach, and at the end of some months I used it freely and constantly. As soon as I could bear the motion of a carriage, I took gentle exercise in that way. Afterwards, when I could sit a horse alone, I was helped into the saddle, and every day rode a small distance, increasing it gradually till I rode from twelve to fifteen miles in a day. Here my recovery was at a stand for some months, when I resolved to try the effect of a long journey on horseback. I rode first into Connecticut, and afterwards to Boston, in which journeys I laid the foundation of that good health which I have now continued to enjoy for more than ten years; and my voice, particularly, is clearer and stronger than it ever was. A habit that frequently required aperient medicines, was greatly increased by loss of blood, and for more than seven years I was obliged to have daily recourse to them. It is now upwards of three years since I have used them at all. A pint of beer or of cyder at any time sufficiently answers the purpose. This fact is contrary to another principle of many physicians, and contrary to the pressing advice of several of my medical friends, rather to struggle with the disease than to use so constantly the medicines necessary to overcome it. They assured me that I would totally destroy the tone of my bowels, and perhaps fall an early victim to my remedies. However, resolved to live as comfortably as possible while I should live, and not solicitous for a prolonged existence of sickness and pain, I persisted in my own course; and I now find that the medicine was infinitely less pernicious than the habit, and that, contrary to prediction, it has relaxed the tone of my bowels just to that state in which it ought to be. I have found, however, many years ago, that a small pressure upon them impeded their regular action, and produced sickness at stomach, and pain in

the head. This induced me to invent a kind of suspenders to relieve my stomach, long before I knew that fashion would employ them to shew the shape to more advantage. My own experience has convinced me that persons of delicate habits often suffer greatly from tight waist-bands, when they are not able to assign the cause, and especially women, from the manner in which many of them tie their clothes, and the weights they suspend in their pockets.

Thus, sir, I have given you the history of my disease and the treatment of it, which, I doubt not, you will pronounce uncommon. I have gone back to an early period of it, that, having all the facts before you, you might form a more accurate judgment of the whole. I have, perhaps, carried my bleedings somewhat farther than was absolutely necessary; but, in such cases, it is difficult to fix the point of strict necessity, and success has justified my rashness. And I am persuaded that, to great bleeding, and the thick flannels in which I immediately wrapped myself, all with a view of taking off the impulse of the blood from the wound in my breast, I owe my freedom almost wholly from inflammation and cough. I judge thus, because in many instances since that time, when I have imprudently taken cold, and feared the effect of the cough on my breast, I have had immediate recourse to increase of flannel and to bleeding, which have relieved me in a very short time.

I have had no medical education, and have had no theory to bias my mind. What I have done at any time contrary to advice, I have done, impelled by the urgency of symptoms, or led by probable conjectures concerning the effect of the means I used, without being restrained by *principles* which might, perhaps, have intimidated me. I draw no general conclusions from my particular case. This you will be better able to do when you have compared it with so many others which must have come under your observation. I believe it would be dangerous for an indolent and inactive person to be reduced so low by bleeding as I have been, or one who had not equal resolu-

tion to make the exertions neceſſary to recover him from that ſtate. Activity in duty, and firmneſs of mind are often among the beſt medicines.

I am, Dear Sir,
With the greateſt reſpect,
Your moſt obedient humble ſervant,
SAMUEL S. SMITH.

Hiſtory of ſeveral Caſes of Phthiſis Pulmonalis treated with Mercury.

Lewiſtown, Mifflin county, (Penn.) May 28, 1805.

Sir,

THE three following caſes of Phthiſis Pulmonalis treated with mercury, I tranſmit you for publication in the Philadelphia Medical Muſeum, if you ſhould deem them worthy of inſertion.

In one caſe the mercury was ineffectual; but this caſe can furniſh no objection to its uſe; on the contrary, it irreſiſtibly enforces more ſeaſonable application. Although the treatment of pulmonary conſumption, by mercury, is pretty generally known, yet there ſtill prevails ſuch a degree of ſcepticiſm of its efficacy, amongſt many of the phyſicians, diſtant from the city, as to render the publication of caſes, as they occur, highly neceſſary. Some have uſed it without ſucceſs, which has deterred them from a ſecond attempt. But it is not to be ſuppoſed that it can effect a cure in every inſtance. Other diſeaſes, of much leſs force, have deſtroyed life, notwithſtanding they have had their appropriate remedies.---It is to be hoped that the doubts of medical men on this ſubject, will ſhortly be diſſipated; and to furniſh my mite, the ſubſequent caſes are ſubmitted.

I am, Sir, with reſpect,
Your moſt obedient,
WILLIAM WATSON.

Dr. John Redman Coxe.

I WAS called, on the 8th of February, 1804, to viſit E. W. Hale, Eſq. counſellor at law, a young gentleman about twenty-ſeven years of age, who, a few days before had been attacked with pneumonia, from great expoſure to cold. He was able to walk about, but, contrary to his uſual appearance, was very much dejected, complained of laſſitude, fever, and hard and dry cough; but unaccompanied with pain in any part of the thorax; the pulſe ſmall, but tenſe. I conceived his diſeaſe to be a bad catarrh, but having ſuſpected, for ſome months previous, that his lungs were in a very weak ſtate, I felt a good deal apprehenſive of the event.

He was blooded, and took an emetic of ipecacuanha. His blood exhibited very evident marks of inflammation, and his pulſe roſe after the operation. I left him a few pills compoſed of digitalis and opium, from which, in former caſes of this diſeaſe, I had experienced very happy effects; and, as I lived twelve miles diſtant, I directed him to be blooded next morning, if the cough and ſtricture were not relieved. He was blooded the next morning, and I viſited him on the 10th. He had found no relief from the remedies mentioned, and the indication for blood-letting was greater than at any time before. I bled him; the blood was ſizy and coated as in pleurify. I left him ſome antimonial powders, compounded of nitre, tartarized antimony and calomel, in the proportion directed by Dr. Ruſh. He was to take one every ſecond hour till my return, and alſo to be blooded every day, if fever and ſtricture were not abated. On the 12th I viſited him; he ſeemed much better; was able to walk about; but as the cough was ſtill hard and dry, with ſtricture, he was again blooded, and directed to have the operation performed daily, till he could expectorate with freedom. The powders were repeated, ſo as to purge him and ſweat him. On the 17th he ſent for me: I found him much worſe: he was unable to leave his bed, fever very high, his cheeks effloreſcent, and his pulſe frequent and tenſe. I bled him, and remained the night with him, and the

next morning bled him again. The blood was very inflammatory, but there was ſtill no pain of the cheſt. The antimonial powders were continued: they ſweated him and purged him, but neither the cough, fever nor ſtricture, were relieved. The 20th I ſaw him; he complained much of weakneſs and a diſtreſſing tickling cough. His pulſe ſtill indicated blood-letting; the blood very inflammatory. I gave him a mixture of nitre and ſpermaceti, in the yolk of an egg, which appeaſed the tickling. The arterial action was now leſs convulſive, fever much moderated; but the cough and oppreſſion of the præcordia continued with much diſtreſs. From the commencement of the diſeaſe, he had expectorated after coughing, a little thin acrid matter mixed with ſtriæ of florid blood. I now applied a bliſtering plaſter over each lobe of the lungs, ſo large as to cover the whole anterior portion of the thorax. While the bliſters were riſing he ſweated moſt profuſely. The bliſters roſe well and excited ſevere ſtrangury, which I did not attempt to relieve as long as it could be borne, having obſerved, in fevers, the happieſt effects from this ſymptom, in determining excitement from parts more eſſential to life. The ſtrangury was removed by the ſpiritus nitri dulcis. The cough was now very diſtreſſing, and expectoration by no means free; but there was a total change in the action of the pulſe. It was faltering and thread-like, and the coughing haraſſed him ſo much, that I was apprehenſive he could not ſurvive many hours. Profuſe ſweating and frequent deliquia animi: laudanum was preſcribed, and to be repeated after ſhort intervals, to prevent the torpor of indirect debility. He took a little Madeira wine frequently and ſago gruel for food; with theſe he was ſupported for ſeveral days. From his cough, hoarſeneſs, ſtricture, and the matter expectorated, being ſtreaked with blood, I was ſatisfied the diſeaſe had degenerated into phthiſis pulmonalis. At this time he was as much emaciated, as I had ever known a patient to be in the typhus ſtate of the ſame diſeaſe.

It was then twenty-two days from the period of attack; I had no hopes of a recovery. He was unable to change his po-

ſition in bed. A ſevere hectic viſited him every afternoon, and he could not ſpeak to be underſtood. He took wine, laudanum, opium, and ſometimes bark; but they afforded a very temporary relief.

I had ſeen, ſome time ago, in the Medical Repoſitory, three letters from Dr. Ruſh to Dr. Miller, on the efficacy of mercury and tonic remedies in pulmonary conſumption. I had attempted this medicine with others, but they were too much exhauſted before they would ſubmit to its adminiſtration. I now began it with Mr. Hale, but doubted much whether ptyaliſm could be excited. I dreaded that the excitability was too far exhauſted to favour the operation of any remedy.

Half an ounce of ſtrong mercurial ointment was directed to be rubbed into his ſides and breaſt every night, and two grains of calomel, with half a grain of opium to be taken every fourth hour. This preſcription was attended to till the 26th, when I ſaw him: the mercury had produced no affection of the ſtomach or inteſtines. He had become coſtive. In addition to former directions another half ounce of the ointment was to be rubbed into the ſame parts every morning. The 28th, he had ſtill no dejection from the bowels; two laxative enemata were adminiſtered in the courſe of the evening, which removed the conſtipation. The mercury was continued without any evident effect, either upon his mouth or upon his breath. In addition to the mercury already preſcribed, four grains of calomel were directed to be taken morning and evening, mixed with a little honey, which was to be diſſolved in the mouth, with the intention of exciting action in the gums and ſalivary glands. On the 4th, there were no ſymptoms of mercurial diſeaſe; the medicine did not even purge him.

The mercury had now been taken for eleven days, in the quantities mentioned. He ceaſed to take it internally, but two ounces of mercurial ointment were directed to be rubbed into his ſides, breaſt, and thighs, every twenty-four hours, and Madeira wine and laudanum to be given in ſuch quantities, and repeated after ſuch intervals, as might ſupport the continued

excitement of the medicine. They were preſcribed with the intention of raiſing the ſyſtem, to that point, which would favour the ſalutary operation of mercury. 6th, No ſymptoms of ptyaliſm. 9th, The ſame; cough diſtreſſing, copious expectoration of pus and florid blood, excited with deep, ſonorous, and difficult coughing. Hectic fever very high every afternoon.

The vaſcular ſyſtem, as well as the muſcles, were in the moſt extreme ſtate of debility. The mercury was ſtill continued externally, and bark given to ſupport a more durable excitement, and laudanum to appeaſe the diſtreſs of coughing. His common drink, during the whole courſe of this treatment, was malt beer, in the uſual ſtrength. 11th, No change of ſituation. Bark did not agree well with his ſtomach, and wine, ſoups, and opium, were adminiſtered as a ſubſtitute. 14th, I viſited him,---the mercury had not acted.

I then conſulted, by letter, my ingenious friend Dr. Harris, of Bellefont, who, I had heard, had been ſucceſsful in the cure of Phthiſis Pulmonalis, with the mercurial treatment. He adviſed the uſe of more durable ſtimulants, as columbo, gentian, &c. and the application of flannel bandages ſaturated with mercurial ointment, to the breaſt and ſides, after removing the ſkin by bliſters; but to precede the tonics with a naufeating doſe of tartarized antimony, to excite new action of the ſtomach. A trial of the carbonic acid gas, as directed by Dr. Beddoes, was alſo recommended, either as a means of depriving the lungs of the uſual quantity of oxygen, the principle of inflammation and ulceration, or as a vulnerary. The naufeating doſe was immediately preſcribed, the bliſter applied to the breaſt and ribs, and columbo given in ſubſtance, mixed with beer. This was done on the 17th.—19th, His condition as uſual. The ſaturated bandages were now applied. Calomel was rubbed into the mouth and gums, and mercurial ointment was rubbed into his throat. He inhaled, during ſeveral days, the carbonic acid gas from a tube placed in his mouth, when it was diſcontinued, as well from its apparent inutility, as from a ſuppoſition that it might impede the ptyalitic excitement of mer-

cury by diſoxygenating the ſyſtem. He alternated the durable ſtimulants, columbo, gentian, orange peeling and bark, with one another, till the 26th, when calomel and opium were given in doſes of a grain each, every fourth hour. The ſtimulants were continued, the calomel rubbed into his cheeks and gums twice a day, and the ointment into the throat as often. The bandages were renewed after being ſaturated, every twenty-four hours.

His mouth had been ſore from the commencement of the diſeaſe; but it now exhibited evident ſymptoms of the operation of mercury; his breath alſo indicated the action of the medicine; but all the ſymptoms of pulmonic diſeaſe continued with unabated violence. 29th, His mouth ulcerated, but no appearance of ptyaliſm. April 2d, The ſalivation had not begun, nor did his mouth appear more affected. From the 21ſt ultimo I had diſcovered ſoreneſs of the gums from the mercury. At this time, I had it in view to try the nitric acid, to haſten the ptyalitic action, but when I returned on the 4th the ſalivation had begun.

Thus, after having ſpent *forty-two* days in the moſt aſſiduous attempts to ſalivate him; with unſpeakable joy I ſucceeded, after having preſcribed two hundred and twenty-two grains of calomel, and thirty ounces of mercurial ointment, compoſed of two parts axunge, and one part hydrargyrus. The ſtimulants mentioned were continued, and the mercury as before, and he had uſed a cordial and ſtimulating diet, from the tranſition of exceſſive to deficient excitement of the muſcular and vaſcular ſyſtems.

8th, He ſalivated about two pints in the twenty-four hours. The cough had abated in frequency and violence. The ſaturated bandages were ſuffered to remain, but the calomel and opium were withheld. 12th, The ſalivation had increaſed to three pints, the cough perfectly eaſy, and the quantity of pus expectorated, much diminiſhed. 16th, The mouth and fauces very much ſwelled, ſalivation very profuſe. The columbo, &c.

were withheld, and laudanum directed to be frequently taken, and a gargle of borax and honey dissolved in tepid water, diligently used. 19th, The discharge of purulent matter had disappeared, and the cough had entirely left him. At this time, from two to three quarts of saliva daily flowed from his mouth. The emaciation was extreme, and he had not as yet been able to raise himself from his bed. His appetite good. He now took columbo in infusion, cordial diet, and laudanum. The saturated bandages were directed to be removed; but owing to a mistake in the attendants, they were suffered to remain on till the 1st of May. At this time he could walk through the room, although the salivation had not abated in the least, and the emaciation was, if possible, greater. The bandages were now removed. He continued the columbo, gentian, &c. and on the 11th, the ptyalism began to abate, but did not altogether leave him till the 15th of June—all which time he took the durable stimulants in diminished quantities, cordial diet, wine, beer, and London porter.

The recovery of health was rapid; but hoarseness and weakness of the voice remained. He was directed to take garlic daily, which removed these symptoms about two months after. He is now more lusty than he had ever been before; but occasionally feels a pain in his breast from close reading or writing, which leaves him when he rides or exercises. From the 22d of February he drank half a gallon of beer daily. Five weeks of the time he was under the operation of mercury, he never spoke, on account of the tumefaction and soreness of his mouth, tongue, and fauces.

He had the remittent fever slightly, the autumn before he was attacked with pneumonia; till that time he had been very healthy, and somewhat corpulent. The disease was not hereditary, nor had he any appearance of mal-formation of the thorax. Since his recovery, he has been perfectly healthy, except that he had a few fits of vernal intermittent, in the last month.

I was called on the 10th of April, 1804, to viſit Mrs. Irvine, a married lady of delicate habit, about thirty years of age, who had been afflicted with cough and pain of the cheſt, for eighteen months before. She was confined to bed, much emaciated, with inceſſant cough, and purulent expectoration, no appetite, hectic fever in the afternoon, pulſe quick, frequent and irregular, oppreſſion and dyſpnœa, eſpecially on the ſlighteſt motion. She had borne three children, and from the birth of the laſt, ſhe had dated her diſeaſe.

I took away a few ounces of blood, gave her the antimonial powders, and directed two drachms of mercurial ointment to be rubbed into her ſides and breaſt every night. 13th, Her mouth ſore, gums ſwelled, and ptyaliſm begun. I was ſuddenly called to her to-day, when I found her in an hyſteric paroxyſm. I gave her a few drops of vitriolic æther, which, after two or three repetitions relieved the paroxyſm.

About two o'clock the next morning, I was ſent for, in the utmoſt haſte, to viſit her. When I arrived, I found the attendants ſupporting her in the bed, in a fainting fit. In her ſleep ſhe had been attacked with menorrhagia, and the diſcharge was ſo profuſe as to induce deliquium, before it was diſcovered. No pulſe could be diſtinguiſhed, and the diſcharge continued without abatement. I gave her a little laudanum, and directed one of the attendants to introduce flour into the vagina, and preſs upon it with the hand; and as ſoon as ſhe could ſwallow with freedom, I gave her kino and alum rup. She took them in ſuch quantities, and repeated with as much frequency as her ſtomach would bear. The diſcharge, however, did not abate. I was afraid to apply cold water, by reaſon of the mercury; but I ſoon ſaw it muſt be uſed or my patient muſt ſink. Cold water was then applied to the abdomen, perinæum, &c. the windows were opened, and ſhe was directed to drink cold water. The diſeaſe abated ſoon after, and ceaſed in two or three days. I looked forward with much anxiety for the conſequence; but on the 15th her throat, fau-

ces, tongue, &c. swelled astonishingly, but her breathing was not much impeded, and I was now relieved from my apprehensions. The tumefaction of the throat was so great as to prevent swallowing. For ten days she was supported by injections of broth; but the swelling then gave way to blistering on the back of the neck and around the throat, and borax as a gargle. 22d, Salivated about a pint daily: the mercurial frictions were continued. May 1st, Salivation profuse, cough and purulent expectoration much abated. 9th, Cough and expectoration ceased. 14th, Mercurial frictions were discontinued, and an infusion of columbo with wine and a cordial diet, were recommended to be taken. She was excessively weak, but after this time recovered strength daily. 26th, Salivation abated, which left her the 7th of June. She continued to take columbo, gentian, bark, and orange peeling, in succession, till the 1st of August, when her strength was quite restored. She is now much more healthy and strong than she has been for several years.

Miss Lyon, a young lady of twenty three years of age, put herself under my care in May, 1804. She laboured under phthisis pulmonalis for eighteen months or two years. She was much emaciated, had hectic fever, night sweats, did not cough much, nor did her cough agitate her; but she expectorated very freely, had great weakness, and was very averse from motion or exercise. I gave her calomel and opium, and directed mercurial ointment to be rubbed into her sides and breast. The mercury produced no effect. A large blister was applied to her breast and ribs, and saturated bandages applied as in the case of Mr. Hale, but still without effect. Blisters were then applied to the inner sides of her thighs and under her arms, and dressed with mercurial ointment and calomel united. She took infusion of columbo through the day, in such quantities as her stomach would bear, and opium at night. These remedies were continued for six weeks without any abatement of pulmonary disease, and without exciting the least action in the gums, fauces, throat, or salivary glands, when she died a la-

mentable instance of too late application;---the excitability being exhausted below that point, in which mercury will excite disease.

On the diuretic Effects of Mercury in a Case of Syphilis. By JAMES S. STRINGHAM, *M. D. Professor of Chemistry in Columbia College, &c.*

New-York, June 10, 1805.

SIR,

SHOULD the enclosed case of the diuretic effects of mercury, and its consequent inefficacy for the complete removal of venereal symptoms, be deemed worthy a place in your very useful work, it is altogether at your service.

Permit me to take this opportunity of expressing my earnest wish that your labours for the promotion of medical and philosophical knowledge, may meet with that liberal assistance and encouragement, to which objects so important are entitled. A candid and judicious periodical work containing a correct history of facts, uninfluenced by the peculiar hypotheses of its editors, has for some time past been a desideratum in our country, for supplying which our attention is now principally directed to the efforts of our medical brethren in Philadelphia.

I am, Sir, with respect,
your very humble servant,
JAMES S. STRINGHAM.

DR. JOHN REDMAN COXE.

A—— B——, the ſubject of the following caſe, applied to me early in the month of October laſt in conſequence of a ſmall ulcer in the throat, which he ſuſpected to be the effect of a ſyphilitic taint, as he had had chancres during the ſummer before. It appeared that for the cure of theſe he had taken a very conſiderable quantity of mercury, though his mouth had been but ſlightly affected by it. I adviſed him again to adopt a mercurial courſe; and for this purpoſe furniſhed him with the pilulæ hydrargyri of the Ed. Pharm. Of theſe he began with one, morning and evening, but finding no inconvenience of the ſtomach or bowels from them, he gradually increaſed the quantity to eight each day. Theſe, together with the decoct. lignor. were continued from the 30th of October to the 19th of December, when by my particular requeſt he deſiſted from any further uſe of the remedy. I was much ſurpriſed to find that, notwithſtanding the great number of pills which he had taken, and the great quantity of mercury which muſt neceſſarily have been introduced into his ſyſtem, no perceptible effects had been produced either upon the ſalivary glands, the gums, or the breath. On inquiry, he informed me that he had ſometimes experienced a ſlight ſoreneſs of the mouth while taking the pills, that this was ſoon ſucceeded by an unuſual flow of urine, after which every trace of the mercury entirely diſappeared. This preſented to me a caſe of a complexion entirely novel, and I determined to make another effort to produce an effect which I conſidered as eſſential to his ſafety. Accordingly, he again commenced taking mercury combined with opium, and every precaution was taken to guard againſt its action as a diuretic—but in vain; no ſooner was any part of the fauces affected by the medicine, than a præternatural ſecretion took place in the kidneys; and although he continued to take his pills regularly, his mouth became ſound as though they had never been exhibited. With reſpect to his throat, the ulcer began to mend ſhortly after he commenced the mercurial courſe, and in about three weeks entirely diſappeared; but it has ſince occaſionally returned, though by the applica-

tion of cauſtic it was removed in two or three days. I may remark, that during the exhibition of the mercury, neither the ſtomach nor bowels of my patient were in any way affected by it.

It is very poſſible that caſes of a ſimilar kind may have occurred in the private practice of other phyſicians, but I do not recollect that any inſtance has been recorded, where ſuch a regular determination to the kidneys took place from the action of mercury, ſo effectually counteracting the objects for which it was intended. I confeſs that I feel no ſmall degree of embarraſſment with reſpect to that plan of treatment which will moſt effectually guard againſt the recurrence of ſyphilitic ſymptoms in this caſe, and more particularly as to what are the data, on which I may venture to pronounce my patient ſecured againſt any future inconvenience from his preſent infection.

I have heard phyſicians complain of the great difficulty they ſometimes found in producing ſalivation. May not the ſame obſtacle have exiſted in ſuch inſtances as in the caſe juſt related? And where too profuſe a ſalivation ſupervenes, may we not infer from this caſe, that diuretics are the moſt effectual means by which to procure an alleviation of ſymptoms?

An Account of a remarkable Child born at Woburn, in New-England, April, A. D. 1771. *By* Dr. Benjamin Thompson, *of Concord, in New-Hampſhire; with a plate.*

IN the beginning of April 1771, the wife of William Johnſon of Woburn, (a woman of a ſtrong robuſt conſtitution, aged about 38 years) was delivered of her ſeventh child, after having been pregnant about eight months and a half. Having heard

that there was ſomething extraordinary in the form of the child, I went to ſee it, and found the following particulars, viz.

1. A remarkable ſeparation of the *frontal bones*, extending from the *coronal future* quite down to the noſe; leaving an opening between the bones about an inch in width in the wideſt part, covered by the *cutis*, which was exceedingly thin and tranſparent; the edges of the bones, and the veſſels of the *dura mater* appearing quite plain through it.

2. A complete hare-lip.

3. There was not the leaſt appearance of any thing like an *arm*, *ſcapula*, *clavicula*, or *ribs* on the left ſide. The common integuments being continued from the ſpine of the *vertebræ* to the *ſternum*, ſerved as a covering to the left lobe of the lungs, heart, &c. the latter of which puſhed the ſkin outwards in the form of a large tumor.

4. From the *anterior* and *ſuperior* part of the *ſternum*, projected a ſmall body about an inch and a half in length; in form and ſize very much reſembling the finger of a child.

5. The diſtance between the ſpine of the *os ilium* and the articulation of the *humerus* with the *ſcapula*, was very ſmall; which at firſt led me to imagine that ſome of the *vertebræ* of the back or loins were wanting: but upon a more nice examination I found, that this apparent ſhortneſs of the *abdomen* aroſe from a very remarkable curvature of the *lumbar*, and two or three of the *dorſal vertebræ* forwards, in ſuch a manner that the diſtance between the *os ſacrum*, and the eighth or ninth *vertebra* of the back was ſcarcely half an inch. The ſkin and common integuments being continued in a ſtraight line from the back to the *os ſacrum*, it rendered the curvature leſs conſpicuous externally. This bend of the *vertebræ* being directly forwards, it rendered the cavity of the *abdomen* exceedingly ſmall, and irregular: but the *abdominal viſcera* were by no means ſmall in proportion to the capacity of the *abdomen*, but rather exceſſively large, even when conſidered with reſpect to the bulk of the child.

The *cutis* paſſing from the *ſternum* obliquely downwards to the *poſterior* part of the *oſſa ilii*, and from thence being connected to the upper edge of each *os ilium* and the *oſſa pubis*, it left the *anterior* and *lateral* parts of the abdomen without any appearance of ſkin, abdominal muſcles, or any other integument ſave only the peritoneum, which (projecting outwards through this aperture) contained the *abdominal viſcera* in the form of a vaſt *ſaccus*.

6. The bones, muſcles, and integuments, of the pelvis and thighs; the figure and ſituation of the parts of generation, &c. all ſeemed to be proper to a male. The left leg was conſiderably crooked and irregular. Both feet were very much deformed; the ſole of the left turning almoſt directly upwards and outwards, and the four ſmaller toes of the right growing together by pairs, each toe having a ſeparate nail. The bones, muſcles, ſkin, &c. of the right ſhoulder, arm and hand, were proper, to external appearance. The *muſculi maſtoidei* aroſe from the *ſternum* as is common; and all the other parts of the child (ſo far as I was able to determine) were natural in form and ſituation, as far as was conſiſtent with their dependence upon, and relation to, thoſe parts which were wanting and deformed. But as I was not permitted to examine the body any further, I am not certain but that there were other remarkable miſconformations internally: as to its external appearance the incloſed drawing is a pretty exact repreſentation, being a copy from one which I drew when I went to ſee the child, and which was thought by all preſent to be a great likeneſs.

The want of abdominal muſcles, and ribs on the left ſide, rendered reſpiration impoſſible; but though the lungs were never inflated, yet the circulation was carried on for more than an hour after the *umbilical* veſſels were divided, as I was informed by the ſurgeon who delivered the woman; and alſo that during that time the child was frequently ſeen to move its head, hand, &c. It is very improbable that the ſurgeon (who was a very judicious gentleman) and other perſons who were preſent, ſhould be deceived with regard to the circulation after deli-

very; for the left ſide being deſtitute of ribs, as before mentioned, the motion of the heart was ſeen very plainly through the ſkin, pleura, &c.

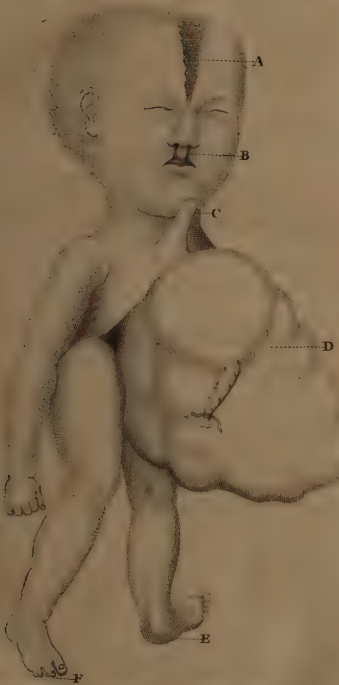
Upon aſking the mother whether ſhe had met with any accident (ſuch as a fall, fright, or the like) during her pregnancy, which ſhe thought might occaſion the deformity of the child; ſhe told me ſhe had met with nothing extraordinary, nor did ſhe at all expect to have been the ſorrowful mother of ſuch a monſtrous infant.

AN EXPLANATION OF THE DRAWING.

A. Repreſents the opening in the cranium.
B. A hare-lip.
C. A ſmall body projecting from the ſternum.
D. The bowels lying without the abdomen.
E. A club-foot.
F. The toes growing together by pairs.

An account of a Caſe of Fever and Pain from Rheumatiſm, being relieved by the diſcharge of electric Sparks from the Body. By FRANCIS JOHNSON, *Eſq. near Philadelphia.*

FOR many years, I had, from a variety of obſervations made upon my own *perſon* and *health*, conceived, that *good health* depended upon an exact equilibrium of the electric fluid being kept up within my ſyſtem. I frequently found, on experiment, that if my pulſe was languid, and my ſpirits depreſſed, my frame received with avidity (if I may ſo expreſs myſelf) the electric fluid from any proper apparatus; but until about the years 1791 or 1792, I never contemplated that my health depended ſo much upon this fluid (if a redundancy of it was within me) being immediately ejected or drawn out.



Drawn by R. Hopkinson Engraved by Lawson & the Author

In the fall of that period, for two ſucceſſive days and nights, I felt feveriſh, with a total loſs of appetite, a parched ſkin, with violent rheumatic pains in my head, breaſt, back and ſtomach. Late in the evening of the laſt day, being froſty weather, I drew from my pocket a new ſilk handkerchief which I had juſt purchaſed with ſome others of the like kind, then in another pocket; and as I entered my own door, being in great pain, I rubbed my head with it with much agitation and exertion, and immediately *perceived* and *heard* the electric ſparks proceed from thence *moſt abundantly*. I then drew the handkerchief frequently through my hands from one extremity of it to the other, during all which time, *it*, or *I*, emitted a continued ſtream of *ſparkling*, *crackling* and *audible* fire.

As ſoon as I entered my common back parlour, or apartment which my family uſually occupied during the fall and winter, I luckily met with a number of my friends and connections, ſome of whom, it is true, were *juvenile*, others however were of *maturer* years and of ſcientific knowledge, to whom I communicated this remarkable phenomenon, and whom I requeſted to make the like experiment with the *handkerchief* which I had done. Accordingly ſeveral of them did ſo; but none of them having fever, any chronic complaint, or liſtleſs or reſtleſs moments, but being all in perfect health, (I repeat it) *none of them* did, or could produce the *like effect*.

An hour only elapſed, until I exhibited in the ſame neighbourhood, among three or four friends, the extraordinary manner (as already ſtated) in which I could emit the *electric fluid* through the medium of my *manual* operation on the ſilk handkerchief. At a ſmall diſtance from the place of my laſt operation (if I may ſo call it), I met ſome others of my aſſociates at the houſe of one of my moſt particular friends. At this place I felt *much better* in point of health, that is, my fever had conſiderably abated, the irritation of my nerves had ſubſided much, and my rheumatiſm (the principal cauſe of my complaint) was nearly removed; hence the *electric fluid* or *fire*, or by whatever other name it may be expreſſed, was not ſo

vivid or luminous or abundant as it had been, yet ſtill I performed the operation as heretofore ſtated, while thoſe in *good health* around me could not do ſo. On my return home the ſame evening, I felt myſelf perfectly relieved from fever and pain, and with all my repeated endeavours could not emit one ſingle ſpark of electricity. From the foregoing data, my corollary is—"*That good health depends much upon an exact equilibrium being kept up, of the electric fluid within our ſyſtem.*" Whether any, or what *effects* may be produced from the relation of the *facts* which are here ſtated, I know not. My ſincere wiſh is, that they may prove uſeful to thoſe perſons whoſe ſtudy and buſineſs it is to collect and apply ſuch facts for the improvement of the healing art, and the benefit of mankind.

Account of the Efficacy of copious Blood-letting in a Wound of the Lungs, &c. By Dr. Hugh G. Shaw.

Germantown, 24th February, 1796.

Dear Sir,

I EARLY had it in contemplation to communicate to you the following remarkable caſe of a wound in the lungs, which came under Dr. Martin's and my obſervation, the laſt ſummer. Your late requeſt to the Doctor, has confirmed me in my intention. I therefore proceed to lay it before you, relying on your uſual candour to point out its imperfections.

Henry Oelman, an active man, about forty years of age, a native of Germany, on the evening of the 18th of June laſt, in attempting to jump from a hay-loft window into a waggon, fell upon one of the ledge-pins, which penetrated between the ſecond and third falſe ribs of the right ſide, in an oblique direction upwards. The ſeat of the accident being at Mr. Abraham Rittenhouſe's, two miles from Germantown, an hour had nearly elapſed before we ſaw him. On inquiring into particulars, his companions of the meadow informed us,

" that he had turned half round on the pin, in order to disengage himself, before they could relieve him; and that a stout man, with much difficulty, raised him off, supported in his arms". On examining the wound and the instrument, we found it had passed eight-and-an-half inches, (that extremity being three and one-eighth inches in circumference) and, in its progress, wounded the anterior portion of the right lobe of the lungs.

This we were satisfied in, from plainly distinguishing with the finger, the lacerated parts, when we placed him in different positions.

The intercostal artery, although doubtless abraded, was not ruptured; the hemorrhage, however, was considerable. On withdrawing the finger, a great quantity of air rushed from the wound. Having made use of the common method of expelling the remainder of what entered there, we dressed it with a pledget of simple ointment. At this time, the hemorrhage externally, had stopped. He complained of violent oppression; his pulse tense and depressed, his breathing very difficult, though he spoke pretty distinctly. As quickly as circumstances would admit, we took thirty-two ounces of blood from him, after which he said he felt greatly relieved. In order to empty the intestines, he was afterwards ordered a smart purge. The next morning at five o'clock we saw him. His purge had operated, and he slept tolerably well the remainder of the night; but then complained of a severe pain and oppression across the inferior part of the thorax, as far as the scrobiculus cordis. The blood drawn the evening before was not remarkably sizy. I immediately took away eighteen ounces more: his pulse, which before was uncommonly tense, now became softer and fuller, and he said he was much easier. I discovered that one of the family, in order to gratify his accustomed fondness for strong liquors, and willing, as he said, to comfort him in his last moments, had given him a glass or two of spirits. We took the alarm, and determining to adhere closely to the antiphlogistic plan, strictly enjoined the necessity

of avoiding any thing the leaſt ſpirituous, and ordered him to live on weak gruel, chicken water, &c. which I believe, except in one inſtance, was punctually complied with. I confeſs I was remiſs in not enforcing this earlier. We immediately put him on the uſe of nitre and the vegetable acids. We were fearful of joining tart. emet. to the nitre, leſt the quantity neceſſary to ſupport a gentle diaphoreſis, might excite vomiting. We ordered, as a laxative, occaſional doſes of the ol. ricini, which he ſaid he could take better than any other medicine. At twelve o'clock, I found his pulſe hard, accompanied with no ſmall degree of dyſpnœa. The ſeat of the moſt conſiderable pain was poſteriorly along the lower falſe ribs. This I attributed to an accumulation of extravaſated blood. I took away ten ounces, dreſſed the wound and found its appearance favourable. In the evening, I obſerved that the blood taken at noon was much more ſizy than either of the preceding. From this circumſtance, and the ſtill exiſting painful and oppreſſive ſymptoms, I was readily induced to repeat the bleeding to the amount of ten ounces. This bleeding, he ſaid, ſenſibly relieved him, more particularly his breathing. Saturday morning, 20th, I found him much better; the wound diſcharging a laudable pus; his pulſe pretty regular, breathing tolerably eaſy; almoſt clear of pain; his bowels quite free. I therefore did not bleed him, but I had afterwards reaſon to repent that I had not; for at twelve o'clock, a meſſenger came up and told me "he was dying!" I went down immediately, and found him in violent pain, delirious, with a quick tenſe pulſe, and great difficulty of breathing. On applying the ligature with a view to take more blood, I was ſurpriſed to find that it would not flow as uſual, from the firſt orifice; I immediately enlarged the orifice, to twice the ſize, when to my aſtoniſhment, the blood paſſed off in a thick and grumous ſtate, with conſiderably large clots. I was convinced from this appearance, that a reabſorption had taken place. After loſing twelve ounces he declared himſelf "another man." Dr. Martin in the evening found his pulſe at 85, and full, his

appetite remarkably good, as from the beginning. He took away eight ounces of blood, ſtill dark and grumous; and ordered him ſome fruit jellies. Sunday, 21ſt, His pulſe unuſually full and quick. On inquiry, I found that he had eaten meat, contrary to our ſtricteſt orders. I took away ten ounces of blood, which ran freely from the firſt orifice, and appeared much thinner than any of the preceding. He continued pretty eaſy all that day and the next, requiring only two ſmall bleedings (ſixteen ounces.) Tueſday, 23d, Reſted very well the night before; his pulſe ſoft and regular; appetite good; ſo well as to ſit in a chair and have the wound dreſſed, which was now nearly cloſed. Wedneſday, Continues free from pain, except a little in the right ſhoulder. Thurſday, 25th, One of his friends came to me in a great hurry, and told me he was dangerouſly ill. On my arrival I found his ſituation truly alarming: a ſtrong hard pulſe, ſkin and tongue dry, violent pain in the head and breaſt, dyſpnœa, delirium. On inquiring into the cauſe of this dreadful change, the family informed me, "that he had imprudently dreſſed himſelf, the day before, and ſat by an open window, while it rained; that he frequently put his head out and got wet." I once more had recourſe to the lancet, and took away twenty-eight ounces of the purple fluid; on which he exclaimed, "that he felt himſelf in a new world." In the evening he told me the mercurial pills I ordered had operated very well, but that he ſtill felt a good deal of pain and oppreſſion; his pulſe full and veins turgid. I bled him twenty-four ounces, which inſtantly relieved his pain and oppreſſed reſpiration.

The two ſucceeding days paſſed without any ſymptom of danger or alarm. Sunday, 27th, Dr. Martin viſited him; found his pulſe full and about 80; had ſlept tolerably; the wound almoſt healed; took away ten ounces. At half paſt three I found him cheerful; his pulſe 75; had two evacuations from having taken ſome caſtor oil in the morning. He ſaid the only pain was two inches tranſverſely from the wound. The blood taken in the morning contained a conſiderable proportion of

craſſamentum, with but little ſerum. Half paſt nine, continues better, though there is a conſiderable degree of action in his pulſe. He ſat in a chair and was bled (ad deliquium) eight ounces, appearance black and grumous. His pulſe roſe conſiderably after the bleeding. Some pain ſtill continued in his right ſhoulder. Monday, 28th, Complains of great weakneſs; pulſe is quick, but not full. I took ſix ounces of blood away, after which he aſſured me he was entirely clear of pain, except, as he expreſſed it, "a little between the meat and the ribs;" the wound cicatrizing. The next day I found him ſitting up, and in high ſpirits. He ſaid he felt well enough to ride home, which was half a mile, and anxiouſly wiſhed to obtain permiſſion; this I peremptorily refuſed. I continued to viſit him for three days. On the fourth I was much ſurpriſed, in paſſing his own houſe, to ſee him at the window. On my reproving him, he apologized, by anſwering, that he became impatient to get home to his family, and had rode up that morning without the leaſt inconvenience. In twenty days from the accident, he made a pair of ſhoes. We have been under the neceſſity of bleeding him ſeveral times ſince, at ſeven or eight weeks interval.

Many caſes have ſince offered, which indiſpenſably required veneſection; particularly that of Miſs Norton, at the Riſing Sun, who, in ſix days, loſt one hundred ounces of blood: both tables of the frontal bone having been dreadfully fractured, by the overſetting of a chair.

Your aſſured friend
and humble ſervant,

HUGH J. SHAW.

DR. BENJAMIN RUSH.

On the Efficacy of Blood-letting in Rigidity of the Os Externum.

By Dr. Wm. Dewees.

Philadelphia, April 1st, 1805.

Dear Sir,

Some time since, the editors of the Medical Repository,* did me the favour to publish a desperate case of midwifery successfully treated, by copious blood-letting: deeming the subject of some importance, and several similar cases having occurred since; I take the liberty of sending you three, selected from others of minor consequence, for your perusal. Should you think them worthy of a place in your useful Museum, I shall be gratified in having them thus distinguished.

WILLIAM DEWEES.

Dr. John Redman Coxe.

Case I.

ON the 12th September, 1798, I was requested to visit the wife of Samuel Griffith, in consultation with Dr. Jones. Mrs. G——, I was informed by the Doctor, had been in labour sixteen hours; the waters were evacuated early in her labour; her pains, frequent and brisk; but, there was not the least disposition in the soft parts to dilate.†

I sat down to examine our patient, and found the os externum scarcely large enough to admit the finger, and it was mount-

* Vol. 2d, p. 24.

† This patient, like the one whose case was formerly given, had suffered a laceration of the perineum to a very great extent; the parts after a considerable lapse of time healed up, but so unfortunately, as to almost entirely obliterate the vagina. I was called upon for my advice when in this situation, and found the case truly distressing; the passage or vagina was so contracted as not to exceed in size a common quill; the parts extremely callous; and a constant and profuse discharge of fetid acrid pus, kept the poor woman in a continued state of misery and ill health. My friend Dr. Physick was also consulted; by a persevering use of sponge tents, &c. the parts became sufficiently dilated to admit imperfectly the venereal congress; soon after she became pregnant, and the consequences of this pregnancy furnish the above case.

ed up closely against the symphysis pubis, in consequence of the perineum being very much distended by the head of the child. The os uteri was rigid and but little opened---a kind of bridle or small column of flesh ran from the inferior edge of the os pubis and lost itself in the perineum below; against this, the head was firmly pressed. The head was situated naturally, and so far advanced, that the vertex was about to emerge from under the arch of the pubes, covered with the uterus; it had been thus fixed for nearly six hours previous to my seeing this patient; and all that had been done, was, the occasional exhibition of tinct. opii. with steady pressure against the perineum to prevent the escape of the head through it. In this situation of affairs what was to be done?

My ingenious and much lamented friend Dr. E. Smith of New York, immediately after the receipt of my former case, suggested the trial of an infusion of tobacco in similar cases, to supersede the use of such extensive bleeding as had been employed in it; affirming its effects were very similar to those produced by copious blood-letting---such as nausea, vomiting, syncope, and consequently relaxation. The idea pleased me, and I was determined to employ it the first opportunity: the case under consideration I believed to be as favourable a one as could occur, and accordingly proposed it to Dr. Jones; he cheerfully acquiesced in its trial; a strong infusion was made of the tobacco, and a quantity of it with some difficulty, after several ineffectual trials, was thrown up the rectum. It produced great sickness, vomiting and fainting; but the desired relaxation did not take place; we waited some time longer, but with no better success. In the course of an hour or an hour and an half, the more distressing symptoms produced by the infusion wore off, and resolving to give the remedy every chance in our power, we got our patient with some difficulty, to consent to another application of it. Its effects were as before---great distress---without the smallest benefit; the soft parts remaining equally rigid, as before its exhibition.

Suppoſing the bridle juſt ſpoken of might have ſome influence on the developement of the external parts, I divided it, but without any evident good reſulting from it. I now propoſed the remedy that had ſo completely ſucceeded in a former caſe; bleeding nearly to fainting: this was conſented to. We had our patient placed on her feet; taking care to have the perineum well guarded during the operation. Upon taking away about ten ounces of blood ſhe became very faint;* ſhe was immediately laid upon her bed; the moſt complete relaxation had taken place; the forceps were applied, and our patient was delivered in a very few minutes of a fine healthy girl. The mother was put comfortably to bed, and every thing went on in the ordinary way until the ſixth day, when ſhe was ſeized with a violent cholera morbus and convulſions, (to which complaints ſhe was ſubject) and died in twelve hours.

* The ſubject of this caſe was a delicate woman, and wont to become very faint upon the loſs of a little blood. The diſpoſition to ſyncope has frequently aided me in obſtetric caſes, where this ſtate was an object in practice; it is well to inquire if this peculiarity exiſts, as, taking advantage of it, by placing our patients in an erect poſture, we are enabled to effect by the loſs of a few ounces of blood, what could not be obtained in a ſupine one by the loſs of very many. This circumſtance may alſo aid the timid practitioner, who may be afraid to venture on the great depletion that ſometimes becomes neceſſary to produce this effect, when this ſituation is not attended to. I have therefore always placed my patients on their feet, when practicable, before I opened the vein. We may alſo ſpare ourſelves a great deal of trouble, and our patients much anxiety, in caſes of tedious labour, from the unwillingneſs of the ſoft parts to dilate, where this diſpoſition to ſyncope from the loſs of a few ounces of blood when in an erect poſture obtains, by taking advantage of this peculiarity. Few women object to being bled during labour, nay, they for the moſt part think it indiſpenſable when the labour has been protracted. The conſent, therefore, of the patient and her friends is eaſily obtained; all we have to do is, to conceal from them our wiſh to have her become faint. Should ſhe faint we can readily ſatisfy them, by calling to their recollection, it is common to her from bleeding, and that it will be uſeful to her. In this way, we can very often ſhorten a labour many hours, when we might not be able to obtain the conſent of our patient, or we ourſelves think it neceſſary, to bleed her to the extent of forty or fifty ounces.

This case, notwithstanding its ultimately unfortunate termination, fully establishes the influence of blood-letting in this very distressing kind of rigidity; and proves it to act differently from tobacco, notwithstanding the latter produces nausea, vomiting and syncope; and also, that, the quantity of blood lost in some instances may be very small, to induce the desired relaxation.

We conceive, that no possible blame can be attached to the bleeding in this case, as the woman was very brave until the sixth day, when, a disease, to which she was subject, supervened and carried her off.

Case II.

On the 26th September, 1800, I was called to the wife of Michael Falkrod at Frankford, in consultation with Dr. Ruan. She had been in labour twelve or fourteen hours, with her second child; * the pains frequent and strong; the waters discharged some time; the head was situated favourably, and completely occupied the vagina; the perineal tumour large; the os externum not larger than a common finger ring; admitting the finger with some difficulty in the absence of pain; during pain, thrown up against the inferior edge of the pubes in such a manner, as not to admit the finger or allow it to be retained if previously introduced. Externally, a strong cicatrix was found running to the very verge of the anus; internally, it could be traced further. This cicatrix prevented the unfolding of the external parts so effectually, that the repeated efforts of the uterus for several hours, were insufficient to make them yield, though the head had been closely applied to them during that period.

This patient was a strong healthy woman; considerable fever had been excited; the pulse, strong, frequent and hard.

* With the first, she had suffered an extensive laceration of the perineum. It is somewhat remarkable, that all the cases I have related, were in the same neighbourhood, and all had been under the care of the same physician.

I propoſed bleeding ad deliquium, to which Dr. Ruan conſented. We immediately opened a vein and took about forty ounces of blood, but as her pains were ſo rapid, we were obliged to take it from her in a recumbent poſture, and no diſpoſition to ſyncope was manifeſted. This quantity, however, had ſome effect, as there was evidently a beginning relaxation, and an abatement of the violence and frequency of the pains. We now agreed upon a ſecond bleeding, and to have it taken in an erect ſituation. We with ſome difficulty effected this, when, upon taking five and twenty or thirty ounces more, ſhe fainted; ſhe was laid upon the bed, and in a few minutes, by the forceps, was delivered of a fine healthy boy. Our patient recovered rapidly without accident, or draw-back.

Case III.

February 26th, 1803, I was called to the ſame woman in labour with her third child. The ſame circumſtances attended, and the ſame remedy was employed, with a ſimilar reſult. This caſe was witneſſed by Mr. Bond, an ingenious young gentleman of Baltimore.

Two Caſes of Worms in the Vagina, and in the Ear. From the manuſcript Notes of the late Dr. Francis Bowes Sayre.

I had one caſe of worms in the vagina. The patient was a child about two years old. There was conſiderable excoriation of the parts, with a diſcharge from the vagina much reſembling gonorrhœa. Some heat in making water, and a moſt troubleſome itching. The complaint had continued ſeveral weeks when I was called upon. From the niceſt inſpection,

and moſt attentive conſideration of theſe ſymptoms, I could by no means ſatisfy myſelf of the cauſe; however, as the child was otherwiſe in good health, I judged topical applications were alone neceſſary; and accordingly prepared a ſolution of ſaccharum ſaturni, and furniſhed the mother with a ſyringe, directing a little of the ſolution to be thrown into the part, and the excoriations to be waſhed with it four or five times a day. After uſing this remedy three days, ſmall worms, reſembling the maggots which are uſually formed in cheeſe, began to come away, and continued to be diſcharged two or three a day, for many days. They were all dead when diſcharged, and that they came from the vagina, I could not doubt, as I took ſeveral of them therefrom myſelf, by means of a probe introduced for the purpoſe. When the worms were all deſtroyed, the diſcharge ceaſed, and the child was very ſoon after, perfectly well. This caſe happened in the year 1795 to a daughter of Mr. Andrew Nickell, in Nottingham, in the county of Burlington.

In the winter of 1794 I was called upon by Samuel Jones, a ſhoemaker in Croſswicks, county of Burlington, New-Jerſey, for my advice in a caſe of deafneſs. This man had a diſcharge of fetid matter from the ear, a troubleſome itching in the part, and had frequently taken worms out of the ear. Several more of theſe came away whilſt he was under my care. They were about the ſize and ſhape of a grain of rye, of a light browniſh colour, with ſeveral circular rings round the body. This complaint had been of ſome months ſtanding when I was conſulted, and though ſeveral remedies were employed in the way of injection, the worms continued now and then to make their appearance: the diſcharge was undiminiſhed and the deafneſs remained. He was under my care about two weeks, during which time, the only benefit he received, was a diminution of pain. One ear only was affected.

Case of a Worm discharged, apparently, from the Lungs. By Dr. T. Watkins.

Havre-de-Grace, 7th May, 1805.

Dear Sir,

UPON looking over my common-place-book, I found an extraordinary case which I had recorded about two years ago, just as it had been told to me by the patient himself, and which you may think so uncommon as to deserve a place in your Museum.

A young man of about six and twenty years of age, who had been for some time in a state of extreme debility, with symptoms of a pulmonic affection, after an unusual exercise in gunning, was suddenly taken so ill, that his companions were obliged to support him to a house not far distant, where a strong drink of *grog* was given him, which seemed soon to revive him; but, on attempting to walk from the house, he was seized with an inclination to cough, and with a very slight exertion, threw up a *worm* of an uncommon appearance, about the size of the fore finger, of a dark reddish colour and rough surface, with a large opening, supposed to be the mouth, nearly in the centre. It had also numerous pedicles attached to the same surface with the supposed mouth, and lived after being thrown up nearly an hour. Nothing else was coughed up at the time, and the young man felt himself instantly relieved from an oppression he had long laboured under in his breast. I saw him three weeks after this circumstance; he had taken no medicine, was in a state of extreme debility, with a pulse scarcely to be felt even after the severest exercise: his breathing was very laborious, and the oppression at his breast returned upon the slightest fatigue; his appetite was generally good, but his digestion greatly impaired.

Could this worm have been lodged in the thoracic cavity? and if so, can a like occurrence ever be considered as the cause of phthisis pulmonalis?

I have the honour to be,
Dear Sir,
Your obedient humble servant,
T. WATKINS.

DR. JOHN REDMAN COXE.

Account of the Bilious Remitting Fever of Virginia, &c. By DR. THOMAS W. SMITH, *in a Letter to the Editor; dated February 15th*, 1805.

DEAR SIR,

I HEREWITH send you a theory of fevers, which I have drawn up from observation during the late fatal epidemic of Virginia. In doing this, I shall omit including any meteorological observations of the weather, or any account of the disease that does not appear immediately to interest my pursuit; as I understand it is undertaken by a gentleman who, I believe is much more capable of the task than my youth and consequent inexperience will admit of.

If, in addressing this to the public, I should in any degree be the means of elucidating the subject, or removing the veil of obscurity with which it is invested; or if I should add one Iota of defence to that dangerous bridge of mortality, through which thousands, for the want of proper medical aid, drop into eternity, I shall thank God, who, by the assistance of a meritorious physician, hath brought me forth to taste the fruit of knowledge, and view in splendor that extensive field of research which is now expanded before my eyes. But, if on the other hand no benefit should be derived therefrom, I trust I shall at least remain inculpable, and better satisfied than at present. As my abilities in writing are by no means adequate to the task I am about to undertake, and as my diffidence in exposing my language to the public is inexpressible; I shall apologize for any deficiencies of execution by briefly observing,

that I do not deem the Medical Muſeum a repoſitory of criticiſm, but of information.

In entering upon my inquiry into the theory of fevers, I ſhall in the firſt place obſerve, that, there is never an exceſſive action of the muſcular or vaſcular part of the human body that is not ſucceeded by a proportionate degree of debility: which debility may very properly be defined indirect. Infection, or the exciting cauſe of fevers, does not conſiſt in any particular or ſpecific kind of ſtimulus; for as the bladder may be excited to pain and frequent micturition, the ſchneiderian membrane to ſneezing, the lungs to coughing, the ſtomach and bowels to action, &c. by many ſtimulants of very different properties, (which they have not been reconciled to the impreſſion of) yet all tending to produce one effect; ſo the heart and all the ſanguiferous ſyſtem may, *ceteris paribus*, be ſtimulated to exceſſive excitement by a variety of ſtimulants of quite different principles. Infection, which is the ſtimulus I intend chiefly to confine myſelf to, operates univerſally over the whole ſyſtem. It is taken into the lungs in inſpiration: it is imbibed and ſwallowed with the ſaliva: it is abſorbed by the inhalent powers: and, laſtly, it is applied to the mouths of the exhalent veſſels, and aſſiſts in producing a ſpaſm therein. In order to manifeſt the truth of this doctrine, it is only neceſſary to obſerve, that all the cavities of the lungs, ſtomach, &c. afford an acceſſible ſpace, equal at leaſt to the ſurface of the whole body. Exerciſe, though a ſtimulus to the heart, by propelling the blood thereto, cannot add any ſtimulant property to the blood except an increaſe of its temperature, which can ſeldom be ſufficient to produce a fever; but we are not entirely without inſtances of its doing it, for I have ſeen parturient women ſeized with a violent ſthenic fever, attended with a dry mouth and parched ſkin, apparently from no other cauſe than exceſſive exerciſe; but it cannot be of long duration. Spirituous liquors, opium, and every other ſtimulant power ſufficient to produce a fever, will augment it in proportion to their ſtimulant energy, and continue it until their acrimony is

blunted by the fluids which they meet with, or until they are thrown out at some of the emunctories. Stimulants act most powerfully on the parts to which they are applied; yet, as in heating one end of a bar of iron, the caloric will insinuate itself through its whole substance; so in like manner, if a stimulus be applied to any one part of the human body, its effects will from thence be propagated over the whole system, and at the same time not unfrequently affect some organs more than others.

Infection is a substance, no matter whether it be the septic acid, hydrogen gas, other products of animal or vegetable putrefaction, or the moisture and miasmata of marshes, &c. whether acting separately or combined, or whether they act alternately at different times, they have all a tendency to produce one effect. If taken in by respiration, it is received by the blood; if in digestion it is absorbed by the lacteals; and if by the inhalents, the arteries receive it. Thus we see that in whatever way it is received, it is ultimately conveyed to, and intimately intermixed with, the mass of circulating humours, and when enough accumulated, and in a degree sufficient, commences its direful effects. But there are many secondary causes which will facilitate its way to action previous to its natural course, which are now too well known to need mentioning. The disease being now well understood to depend entirely on a fault of the fluids, I shall proceed to consider the manner in which it is proximately occasioned and continued.

Besides the sympathy derived from the parts of its first entrance, where it produces heat and griping pains in the stomach and bowels, sometimes coughing in the lungs, and a fervid sensation over the whole surface of the body; it stimulates the heart and arteries to excessive excitement: and as the contraction of the arteries is well known to depend on the stimulus and velocity of the blood in them, it must appear exceedingly obvious to all unprejudiced minds, that although the propelling power, may, for a while, overcome the resistance of the exhalent vessels, and increase perspiration as exercise does, yet as the extremities of the arteries are by far the least,

and their irritability greateſt, it is certain that if this action be extended to a conſiderable degree they muſt become entirely cloſed, a ſpaſm produced, and perſpiration obſtructed; or if it is not entirely obſtructed, it is ſo diminiſhed that the exceſſive heat of the body evaporates it inſenſibly. And as the heart by its exceſſive action is the original and chief ſupporter of ſuch a ſtage, it cannot continue long according to the laws aforeſaid, before it is thrown into a ſtate of indirect debility: the action univerſally ſubſides, the exhalents dilate, the mouth becomes more moiſt, a copious ſweat enſues, and terminates the paroxyſm.

Although the ſtimuli which produced the paroxyſm, ſtill continue to act, the excitement of the heart cannot again be raiſed, until it has by reſt acquired an accumulation of excitability, or until a higher degree of ſtimulus is ſuperadded. It appears from this, as well as from daily experience, that the more violent the paroxyſm of a fever is, and the greater the debility produced thereby, the longer will be the intermiſſion. I have ſaid above, that the excitement of the heart after a fit cannot again be raiſed until the excitability is accumulated, &c. But in the remitting fever it appears that the excitability is not entirely exhauſted, and that a ſufficiency remains to ſupport the continuance of ſome degree of fever, which is aggravated when the excitability or ſtimuli are accumulated. The exhalent veſſels being the firſt organs that give way to indirect debility, ſo they appear to be the firſt to which the excitability is reſtored, and, by contracting, repel their contents from the ſurface of the body, and give to the heart the exciting cauſe of paroxyſm (or the re-action of Dr. Cullen), whoſe excitability is now prepared to receive its impulſe and commence its inordinate action. A vacuum being now produced in the extreme veſſels, the circumambient air muſt conſequently ſupply it; which gives the ſenſation of coldneſs and ſhivering, or what is called the cold ſtage. That the ſenſe of coldneſs is derived from this cauſe is evident, from the ef-

fects of the atmosphere on a raw or inflamed surface.* This phenomenon is more apparent in intermitting fevers, in which (especially when succeeding to the remitting fever) the excitability is worn down to its lowest degree, the infection in a great measure evacuated, and the fits distinct. In some cases the excitability in the exhalents is very irregularly accumulated, for the chill sometimes commences in the feet and legs, sometimes in the face and breast, and very often runs in narrow streaks down the back, transferring the sense of cold water poured down it. This may in some measure be accounted for, by considering the situation and density of the parts in which the phenomenon most frequently takes place, their remoteness from, or proximity to the heart, and support from pressure.

Continued fevers constitute a middle degree in the scale of action, in which the exciting power continues to act and consume the excitability as it accumulates, consequently no distinct paroxysm or remission can take place.

That obstructed perspiration is owing to the cause aforesaid, viz. a preternatural stimulus of the blood or plethora of the extreme vessels, may be attested by infallible proofs. Thus venesection, by diminishing that plethora, will often produce sweat. The action of the excretories appears also influenced by the nervous power; for sleep, by calling off that energy and suspending the operation of the senses, will often have the same effect. The cause of that effusion consequent on the action of vesicatories being known, will also prove a fulciment to the truth of this doctrine. Those, particularly flies, have generally been supposed to raise vesicles merely by increasing the action in the vessels of the part to which they are applied; a supposition as erroneous as it is absurd. Blisters cause an efflux of serum from the cutis, by producing indirect debility in the part to which they are applied. As a proof of this, I applied a blister plaster to my leg, and when I examined it three hours after, no

* Place the patient's body in a temperature equal thereto, during the cold stage, and the sense of coldness will vanish.

ſymptoms of veſication, but only a redneſs appeared; the ſkin was dry and parched. I removed the plaſter, dreſſed with a dry rag, and upon looking at it, ten hours after, found, agreeably to my expectation, a large veſicle filled with yellow ſerum thereon.

Now, if veſicatories produce effuſion merely by increaſing the action of the veſſels, why did not this veſicle appear while the flies were ſtimulating? I have alſo ſeveral times applied them to the legs of my patients in the laſt ſtage of fevers, which after remaining on all night, did not produce the leaſt diſcolouration of the ſkin next morning, but on examining them in the evening I found (to ſpeak vulgarly) they were well drawn. Theſe are ſufficient to prove that veſicatories produce a diſcharge from the pores of the ſkin in the ſame manner as febrile infection, with this exception, that the one is applied externally and the other internally. If a perſon who has been long given to inebriation, omits his dram a few hours, and ſuffers the ſtimulus thereof to ſubſide; he is ſeized with vomiting, or a very copious ſweat enſues, which can only be checked by a renewal of the ſtimulus. Does this not plainly infer, that the blood is driven towards the ſurface of the body by the ſtimulus of the ſpirits, and produces a plethora and approximation of the excretory orifices? Coſtiveneſs, which ſo frequently accompanies ſthenic fevers, is the conſequence of an increaſed action in the veſſels of the inteſtines, cloſing the orifices of the exhalents that empty their contents therein. To enumerate all the circumſtances that would embrace the truth of this doctrine, would far exceed the limits of this letter, and be an unneceſſary expenditure of time. I ſhall now retreat, and take a more general view of the ſubject.

The remote cauſe of the bilious remitting fever which prevailed laſt year, appears evidently to have been the conſequence of the memorable fall of water that appeared laſt ſummer. To deſcribe the aſpect of the earth in this awful ſcene, and to draw the melancholy portrait of animated nature in its proper colour, would exceed the power of human comprehenſion. The lives of many human beings were extinguiſh-

ed, immenſe numbers of quadrupeds were ſwept from their peaceful ſhores, and conſigned to the diſaſtrous torrent. The inundation embraced almoſt all the low land, and after its ebb, a vaſt number of reſervoirs or pools were left to ſtagnate. The land animals which were drowned, together with an innumerable number of the aquatic tribe and rubbiſh, were left on the ſhores to undergo the putrefactive proceſs. Large crops of ſmall grain which had been ſpoiled by the wet, were left in the fields to ſhare the ſame fate. No ſooner did Sol once more ſend his welcome rays on the face of nature, than I began to anticipate with horror the impending event. The evaporation from an unbroken ſurface now commenced, and in a ſhort time the atmoſphere became completely ſaturated with the noxious products of animal and vegetable putrefaction; ſo much indeed was this the caſe, that at times it was evidently perceptible to the ſenſes,* as was aſſerted by numbers. Its effects in the country were truly alarming; but in Wincheſter (where I then reſided) very few were arreſted by it, except thoſe living in the ſuburbs of the city, or who made frequent excurſions in the country. I am alſo informed that moſt of our ſea-port towns were unuſually healthy: the reaſon I ſuppoſe to be, that although the infection pervaded the whole region of the atmoſphere within the limits of its exiſtence, and conſequently, was precipitated in a proportionate quantity on them, as well as on the country; yet as the ſtreets had been in a great meaſure cleared of filth by the rain, and as it met with little additional ſtimulus, theſe could not prove ſufficient to excite in ſo great a number of inhabitants, the utmoſt degree of its violence, though few (even in Wincheſter) will aſſert that they did not in ſome degree experience its effects. The ſmoke and heat of the town might alſo prove its antagoniſts.

* May we not ſuppoſe it extended its influence to the brute creation? as horſes were univerſally affected with a cough. The putrefaction of vegetables, particularly cabbages, where the epidemic was moſt prevalent, was greater perhaps than was ever before known in this country; but elevated ſituations, where the diſeaſe did not reach, exhibited their uſual ſalubrity.

When a populous city is seized by an epidemic with an exemption of the adjacent country, it must in a great measure be imputed to a local cause, the infection being confined within the verge of the city, as it is in valleys, morasses, &c. where it has this season developed its most fatal effects.

The cure of our epidemic was in most instances easily effected. I shall as briefly as possible describe the mode of treatment which I pursued, (after reconciling my theory to practice, which I did shortly after the disease began to spread.) If called at the beginning before any evacuations had been made, I always thought proper to clear the primæ viæ with a strong emetico-cathartic; or if the violence of the fever had not abated, a mercurial cathartic only, and the emetico-cathartic afterwards, which was repeated if the violence of the disease and state of the stomach indicated a necessity. In most instances the bowels were obstinately constipated (though sometimes the contrary); in which case, if the physic did not operate sufficiently in the course of twelve or fourteen hours, to prevent salivation it was necessary to work it off with a cathartic decoction, of senna and acidulated tartar. The stomach and bowels being now freed from their offensive load, were preserved in that state by gentle laxatives, combined with as much antim. tartari. as the stomach could possibly endure without exciting vomiting. These powders were alternated with a solution of carbonate of pot-ash in a decoction of Virginia snake-root during the remission, and a large dose of equal parts of laudanum and spt. corn. cerv. as two teaspoonfuls or ninety drops of laudanum alone, given at the first appearance of every paroxysm: the drink cool, the diet, though nourishing in general, not too stimulating, the room kept well ventilated, and the linen about the patient changed every other day. I applied a large blister to the neck, and when drawn, divided and applied it to the extremities. If delirious, the head was frequently bathed with cold water or oxycrate, which was of most service when applied by affusion. After a complete intermission was procured, the bark, or Fowler's solution of arsenic proved its specific. This was the mode of treatment

which I found moſt ſucceſsful, when had recourſe to in the beginning, before any thing occurred to vary the ordinary courſe of nature; but where the complaint had been long protracted, or the patient reduced by debilitating powers, the uſe of more powerful ſtimulants became then indiſpenſable. The beſt of which were opium, camphor, volatile alkali, æther and diſtilled ſpirits. The body was alſo waſhed all over twice a day with equal parts of ſpirits and vinegar, and ſinapiſms were applied to the ſoles of the feet.

Under this mode of treatment, ſcarcely one that I know of, fell a victim to the jaws of that devouring cannibal. It is unneceſſary to enlarge further on the treatment of our epidemic, as I believe little new has been diſplayed therein, my intention being only to deſcribe a mode of practice which I have by experience found very ſucceſsful, and explain the modus operandi of ſome of the medicines uſed. The moſt powerful febrifuge, after the irritation of the bile is kept as much as poſſible from the inteſtines, are ſudorifics, of which antim. tartar. and ſpt. nit. dulc. are perhaps equal, if not preferable, to any. But in order to receive the greateſt benefit from them, the patient's drink ſhould be cool, and if poſſible, a ſtream of cool air kept conſtantly playing about the ſurface of his body: for heat being a ſtimulus, except it be applied very moderately, or intenſe enough to produce a ſpecies of indirect debility in the excretories, it will rather tend to impede perſpiration than to promote it. Stimulants of the diffuſive kind, in an early ſtage of the diſeaſe, can prove uſeful, only when given about the commencement of a paroxyſm; when, by adding a ſtimulus to the cauſe, they will either bring about indirect debility, and conſequently terminate the paroxyſm much ſooner, or they may, by partially exhauſting the excitability, prevent the fit altogether. As a proof of diffuſive ſtimuli not anſwering in the remiſſion of the fever, I have given them at ſuch a time, when they very ſoon increaſed the excitement, and haſtened in a paroxyſm prematurely, without any chill. The moſt powerful ſtimulant, as far as my obſervation has been able to teach me, is opium; and I may indeed be

greatly surprised when I reflect on its having been so much celebrated as a sedative,* when in truth there is not a directly sedative power in nature that I have yet observed. And any medicine exhibiting such effect, must produce it, either, by increasing the action in the vessels of the brain to such a degree as to obstruct the passage of the nervous power therefrom, by producing a species of indirect debility therein, or by restoring that equilibrium of action on which ease and sleep depend. But although the former may probably be the cause of morbid sleep, yet for the production of salubrious sleep, I have most reason to subscribe to the latter. I never could procure refreshing sleep when the excitement was already too great, until the effect of the medicine was diminished. On the other hand, when the action of the system was too low, and the excitability at the same time unexhausted, a very small dose of the medicine would almost instantly produce sleep of the most refreshing kind. I have also in one case where both the excitement and excitability were much exhausted, given to the amount of ʒiii. and ʒv. of purified opium in the course of twenty-five days, (I began with five grains every twenty-four hours, and increased to one hundred and eighty,) without raising the excitement to its natural standard, or creating much more sleep than nature solicited when the patient was in health.

Blisters have been extremely useful in this fever, especially when the patient did not sweat freely, when I thought it advisable to keep two or three constantly open. The benefit received from them in the first stage of the disorder was in proportion to the matter they discharged. But in a latter stage, when it assumed a more continued or nervous type, their stimulus was most to be revered. But to receive the greatest advantage from them in this way, they ought not to be suffered to lie on till vesication appears: to guard against which, as few stimulants will act with equal energy longer than two or at most three hours, it is perhaps as long as ever they should lie on, when

* Certainly the pulse must have been forgotten.

applied in order to ſtimulate; for as their ſtimulus will extend itſelf over the whole body, ſo may their debilitating effects likewiſe, and more than counteract the purpoſe for which they were intended. Spirits, externally applied, and ſinapiſms act in common with other ſtimulants, and prove extremely uſeful in an advanced period of the diſorder, but are ſeldom admiſſible in the beginning, as they often in ſome meaſure interrupt perſpiration.

Infection may exiſt long in the body if the accumulation be ſlow, or the proportion kept under by the means aforeſaid. But whether it can produce a ferment in the blood, or not, I am doubtful, and whether a ſpecific corrector will ever be found for it, I will not pretend certainly to ſay; but from conſidering the many and different kinds of it, and their prevalence at different times, we may reaſonably ſuppoſe there will not. And ſhould any power prove ſufficient to mollify or neutralize the infection at one time, it may have a quite contrary effect at another. Therefore, ſince it is perhaps impoſſible ever to inveſtigate the true and chemical properties thereof, it can never be proper in any caſe to truſt to any particular medicine for a cure, without other efforts at the ſame time to expel the cauſe from the body. The different kinds of fevers under the names of yellow, bilious, remitting, nervous, &c. are no more than different modifications of one diſeaſe, as a typhus gravior frequently exhibits each of thoſe characters diſtinctly, in its various circumvolutions. With reſpect to their being contagious, it is too ſimple a problem to require one minute to ſolve. There have as many eſcaped who have formed part of the number of a numerous family, and been conſtantly expoſed to its influence, as there were of thoſe who had no opportunity of receiving the human contagion. There is not a doubt, but in jails, hoſpitals, or cloſe houſes, the air by being confined becomes more ſtrongly impregnated; but this is all that can be advanced to vindicate the contagion of fevers. The exciting or ſecondary cauſes are innumerable: the accumulation may take place to a conſiderable degree, if none of thoſe cauſes occur to

rouſe it into action, and yet be attended with very little injury to health, except at times a pain in the head, ſtomach, back, &c. But in thoſe caſes the attack is generally more violent; conſequently no good reaſon for too ſtrenuouſly avoiding them.

Few caſes of the black vomit, or ejection of matter reſembling coffee grounds, have appeared in this country, nor did the pulſe often indicate much inflammatory diatheſis: but when it was the caſe, the uſe of the lancet was ſcarcely ever admiſſible. Nay, God forbid it! for inſtead of a lancet, it has proved a fatal ſword to hundreds.

I have not ſeen a ſingle caſe wherein veneſection was performed to any extent, that did not recover with difficulty; neither did I perform the operation more than thrice, before I detected the evil, and all the patients I bled afterwards were three out of ſeveral hundred. In thoſe, the violence of the diſeaſe appeared to threaten the immediate deſtruction of life. The conſequence was, that one of them died, and the reſt recovered with difficulty. One caſe in particular is worth mentioning. I viſited a woman, aged 45, who was violently attacked; ſhe was much diſpoſed to obeſity: after the firſt remiſſion, which was pretty conſiderable, ſhe was bled to the amount of ſixteen ounces; the fever very ſhortly aſſumed a continued form, and as one paroxyſm produced very little debility in the exhalents, the ſtimuli of the remaining blood and febrile infeionct acting gently, kept them cloſed, and no ſweat enſued: the moſt powerful ſudorifics, as the warm bath, &c. were tried to no purpoſe; I endeavoured to procure a remiſſion by purgatives, but could not. At length obſerving that as the depletion was great, and the patient now much debilitated, this courſe was no longer ſafe, and as I alſo found there would not be ſtimulus enough added to the remaining blood, to produce another paroxyſm ſufficiently energetic to ſuperſede the excitability of the exhalents, and produce further debility therein; I determined to replete the veſſels as ſpeedily as poſſible: accordingly, wine, rich ſoups, jellies, &c. were preſcribed in as large quantities as the ſtomach could endure. This regimen was not long per-

sisted in before I was gratified with the sight of a remission---the pores were opened, and my patient from that time mended. As a tense or inflammatory pulse indicates nothing more than a powerful or noxious stimulus, it is hard to say how far it is expedient in any case, to hazard the danger of venesection for an uncertainty: for it can in no way extract the stimulus of infection from the system, than in proportion to the quantity of blood drawn.

On the Use of Spirits in Diarrhœa, &c.

I HAVE observed more benefit from the use of distilled spirits in inveterate diarrhœas, than from all the other medicines of the materia medica. It should be repeated so often as to keep up a constant stimulus, viz; at least every two hours.

The benefit of seneka in the hooping-cough, I have not found equalled by any other medicine. It should be prescribed nearly as for the croup, viz. as a constant stimulus in the fauces and œsophagus.

Having traversed the limits of this undertaking, I shall conclude by stating, that if these lines should in the least degree meet the approbation of the public, I shall think it my duty to enlarge them with such necessary notes as may occur in my future practice.

I am, with sincere respect,
Your friend and humble servant,
THOMAS W. SMITH.

DR. JOHN REDMAN COXE.

Some Account of Batavia, and of the Sources of its unhealthineſs.
By STUBBINS FFIRTH, M. D.

Batavia, December 4th, 1804.

SIR,

TO aid you in your very laudable endeavours for the promotion of ſcience generally, and of medicine in particular, I offer the following account of this diſtant and very ſickly place, which you are at liberty to make uſe of as you think proper.

Batavia, the capital of Java, lies in lat. 6°. 10′. S. and lon. 106°. 50′. E. It is ſituated in a plain on the northern and weſtern part of the iſland, and near the ſtreights of Sunda. The city is regularly laid out, the ſtreets are wide, and croſs each other at right angles. The principal ſtreets have canals running through them, and are adorned with trees in ſome places. The ſmall river ——, riſing in the mountains, and receiving in its deſcent the tribute of ſmaller rivulets, deſcends through the plain, waſhes the walls of the city, and its waters are conveyed by the different canals through every part thereof, as well as of the ſuburbs, finally emptying itſelf below the town into the port. Between the port and the city the land is a low, ſunken meadow, part continually overflowed, and part covered every high water: back of the town the lands are alſo low, and in many places there are ſtagnant pools of water. The canals run through every part of the plain, frequently interſecting each other, and expoſing a very great ſurface to the action of the ſun. The walled city is kept pretty clean, but the ſuburbs in many parts are very much the reverſe: into the canals all the filth and dirt are caſt; they are the receptacles of all the animal and vegetable offals, the cleanſings of the ſtreets, all the dead animals, and dead Malays, &c. ſo that all theſe paſſing from the large ſuburbs through the city, contaminate the air, already much vitiated by its own filth, and by the want of a free circulation, which is prevented by the high

walls ſurrounding it on every ſide, and produce an atmoſphere pregnant with the ſeeds of diſeaſe and death. Even the ſea breeze, which in moſt places is healthy, is here the reverſe; for it has to paſs over a large tract of low, uncultivated, ſunken and marſhy ground, which, from the pools of ſtagnant water and putreſcent matters on many parts of it, emits a gas deleterious to animal life. Moſt part of what is not covered by pools of ſtagnant water is overflowed daily by the tide, and at low water expoſes a large ſurface of mud, &c. to the almoſt perpendicular rays of an intenſe ſun. The exhalations ariſing from this ground are very noxious and diſagreeable, and have frequently, I believe I may with ſafety ſay always, produced in me vertigo and nauſea when expoſed to them early in the morning; and ophthalmia was ſeveral times produced by them. In going up the canal from a ſhip lying in the harbour, you are certain to meet large quantities of putrid animal matters floating down: what with the ſight of dead Malays, in every ſtage of putrefaction, and torn in pieces by the alligators; the dead horſes, cows, &c. producing an intolerable ſtench, and the emanations from the banks of the canal, and the meadow already mentioned, combined with the intenſe heat of the ſun, and its reflection from the water, you are certain to have a conſiderable degree of nauſea, with head-ache and great languor produced. Strangers univerſally complain of the ſame effect being produced, and although it is leſs perceptible the longer they remain at Batavia, yet its deleterious effect is not leſs hurtful, until they become ſeaſoned to the climate; and even then, on the ſlighteſt irregularity, they are ſure to ſuffer, as it only requires an exciting cauſe to produce the diſeaſe at any time; and in perſons not accuſtomed thereto, it is ſo powerful as to act not only as a remote, but as an exciting, and, by producing debility, as a prediſpoſing cauſe alſo. Strangers who commit a debauch, or who are much expoſed to the direct rays of the ſun, generally are attacked. With reſpect to the great mortality amongſt the ſeamen, from northern latitudes, it is eaſily accounted for. It is a cuſtom amongſt

thoſe mariners, and eſpecially the Americans, to devote a day to pleaſure (as they term it) in every port they go to. This is a privilege which they will by no means give up, ſo that the commanders of ſhips, however unwilling, are obliged to ſubmit to it. When they go on ſhore in this manner, a number of them are together; they commit great irregularities, and get intoxicated, expoſe themſelves to the intenſe rays of a tropical ſun, wander about the ſtreets and ſuburbs, ſpend the night in drinking, dancing, carouſing, &c. or lie aſleep in the open air, expoſed to the dews and viciſſitudes of the weather, by which means they generally receive the ſeeds of diſeaſe, and are ſoon taken ill. Theſe irregularities would be ſufficient to induce diſeaſe in any country: how much more in ſo baneful a climate as Batavia, when expoſed to the other circumſtances already enumerated? It accordingly happens that the men ſicken very faſt after being thus expoſed, eſpecially if they are obliged to work hard for a day or two afterwards. And as ſhips generally ſail the day after the men have been aſhore on liberty, whereby they have to exert themſelves conſiderably in weighing anchor, making ſail, &c. and if the monſoon has ſet in, are much haraſſed and expoſed in beating through the ſtreights of Sunda, as it requires all hands to be on deck conſtantly, and perhaps for ſeveral days; they have little or no reſt, and are continually wet, fatigued, and almoſt exhauſted by their exertions in working the ſhip, whereby they ſicken daily and die very faſt. Large ſhips, to avoid this, go through the Java ſea, and paſs between Bali and Java through the ſtreights of the former. Here alſo they are ſometimes obliged to beat through, and in running along the coaſt of Java and Madura, before they arrive at the ſtreights of Bali, they are ſometimes becalmed for ſeveral days, during which the dyſentery and fever break out and ſpread rapidly, attended with great mortality. As in this paſſage they frequently ſtop at Balambuan to procure water and refreſhments, the men are again expoſed to the baneful influence of the miaſmata ariſing from the rice grounds, the ſhores of the ſtreights, &c. &c. with the

fatigue of watering, which acts as an exciting cause; so that disease makes great progress, and instances have occurred where ships (soon after proceeding to sea) have lost four-fifths of their men, and been obliged to put into the first port they could make, to get hands to work the vessel home. Fortunately, however, for the mercantile interest, such cases are not general, although it rarely happens but what most of the men have an attack of disease before they arrive at the port of destination; particularly in large ships that are under the necessity of lying a considerable time at Batavia to load, where consequently the men being more exposed, have their systems greatly impregnated, I might almost say, saturated with the deleterious miasma, which only waits for an exciting cause to give it activity, when it soon produces direful disease, that often hurries the miserable patients to that "bourne, from whence no traveller returns." Sailors who are prudent, and do not leave their ships, are not so liable to be attacked, especially if they avoid the night air, and do not sleep upon the decks. The disease (i. e. the fever) is certainly local, being engendered by the causes already mentioned, and is *never contagious*. The people here, have no idea of the fever being *spread or communicated by contagion*; yet if this fever was to prevail in the sea-ports of the United States, it would be called *malignant fever*, and said to be *very contagious*. It shews many of the symptoms of the yellow fever of America; and perhaps the only reason they are not exactly alike, is the difference of climate, &c. for it is equally, yea, more malignant, in many cases. In Batavia every person says it is *not contagious*; in America, a disease *nearly similar*, if not the same, is *said*, by *many*, to be *decidedly contagious* and imported. If it is not contagious in Batavia, can it be so in America? If it arises from local causes in the one place, why may it not in the other? The laws of *nature* are *immutable*, they are alike in every situation. If the disease is not contagious, and arises from local causes in one country, or one part of the world, *it must* in every part in which it prevails: if certain circumstances will produce it in *one place*, similar ones will pro-

duce it in another. They will *in any place, in every place,* no matter whether in the torrid or temperate zones.

With sentiments of the most profound respect and esteem,
I remain, yours, sincerely,
S. FFIRTH.

DR. JOHN REDMAN COXE.

Observations on the Eruptions in the Vaccine Disease. By DR. TOBIAS WATKINS.

Havre-de-Grace, 9th June, 1805.

DEAR SIR,

THE enemies of vaccination, think they have one unanswerable objection to the preference of that disease to the small-pox, namely, the eruption which, it is contended, is so common a consequence, and which is even more troublesome and more dangerous than the small-pox itself. It is the duty of every unprejudiced person to give his testimony against objections so unfounded, and to remove, as far as in his power, every obstacle to the universal adoption of a prophylactick, which promises so much benefit to mankind. Under this conviction I have thrown together a few observations, the result of my practice this spring, and should they tend in the remotest degree to preserve a single being from the variolous infection, my ultimate object will be attained.

Early in March I obtained from the *hand* of a gentleman, who had *previously* had the *small-pox,* * a portion of vaccine virus, with which I vaccinated nineteen persons. On the second

* A Physician of this neighbourhood, who afterwards assured me, that he had every symptom of having been *constitutionally* affected—as fever, inflammation, the peculiar formation of the pock, &c. I have made the experiment on myself, with variolous matter, *three* times, and had every symptom of the disease as violently each time as at the first, except that the eruption was confined to the inoculated part.

and third days, their arms exhibited a fallacious appearance of infection, which was entirely removed before the fifth day, when I found that it had taken effect in one only, a child, who afterwards had every characteristic of a true disease. Unwilling to trust a second time to virus under such circumstances, I procured it fresh from a child (who had been vaccinated with matter, received from a physician of respectability in Philadelphia) and succeeded in communicating the disease to the remaining eighteen, all of whom passed through it without one troublesome symptom, except one of my own children, who during the whole of the eleventh day had a high fever, with considerable inflammation and swelling, extending the whole length of the arm, which however entirely subsided before the next morning. About ten days after the scab had fallen off, an eruption of the erysipelatous kind made its appearance on the same child, with several large tumors on the back of the neck, filled with dark grumous blood. This eruption caused no other inconvenience than making the child fretful, from not being suffered to run about as usual, and was entirely cured in a fortnight, by the use of sulphur night and morning. It however, unfortunately served to deter several parents from having their children vaccinated; in vain I endeavoured to persuade them that so far from its being a common or natural consequence, this was the *only* instance out of *nineteen* who had been vaccinated at the same time: and a neighbouring physician assured me, that among a *larger* number of his patients, not the slightest appearance of subsequent eruption or other disease was observed. I had a happy opportunity of witnessing the *beneficial* influence of *vaccination* on the *constitution* of one of my little patients, a girl between three and four years of age, who had been nearly all her life afflicted with a complaint in her bowels, which kept her in a constant state of debility and emaciation. She had been under my care for the last eighteen months, and had tried a variety of medicines, with no permanent advantage; since being vaccinated, she has recovered her health in a surprising manner: from being pale, puny

and sickly, she has become quite fat and ruddy, and in every respect as hearty a child as her parents could wish.

It gave me considerable pleasure to find, in the last number of your first volume, a corroboration of opinion with respect to the *necessity* of the kine pock, becoming a constitutional disease before it can prove a preservative against the variolous infection. It was under this impression I persisted even to the fifth time in vaccinating one of my children (the same before mentioned), who continued to scratch his arm whenever the pock began to form, the effect of which constantly was, that in two days after every appearance of it was obliterated. There is one instance here, in which I have not been able to succeed in communicating the vaccine even after *ten* trials,* and with the matter in three different states, the scab, preserved between glasses, and taken fresh from the arm. I have yet had no opportunity of trying the variolous, but have not a doubt that the patient will prove equally unsusceptible of that contagion.

I am, dear Sir, very respectfully,
Your humble servant,

T. WATKINS.

Dr. John Redman Coxe.

History of a Case of Tinea Capitis cured by Vaccination. By the Editor.

ELIZA MOORE, a mulatto child of two years of age, was brought to me March 28, 1804, for advice in an obstinate case of tinea capitis, which had succeeded a sudden suppression of a discharge from the ears, and had now continued nearly seven months. Little or nothing had been done for the

* These trials were made three successive summers.

child, and the disease had extended itself over the whole head, which had acquired an unpleasant appearance and smell, from the matting together of the hair by the discharge, and want of due attention to it in point of cleanliness. As the small-pox existed in the neighbourhood, and in the very house where the child resided, I told the mother it would be proper first to vaccinate her, to secure her from that disease, before we attended to the complaint of the head. I had another object besides this in view, which was, an expectation of the tinea being removed by the operation of the vaccine on her system. I therefore vaccinated her by two punctures, and directed the mother merely to wash the head with soap and water. This attempt failed—and also a second on the 2d April: a third on the 5th proved more successful, and the disease advanced with perfect regularity, though slightly retarded by early rubbing. It soon however resumed its genuine appearance, and the areola was perceptible about the end of the 10th, or beginning of the 11th day, attended by a slight degree of fever: at this period, an evident alteration in the disease of the head took place. It began to dry up, and in a few days the discharge from the ears recurred; by the time the scab was perfectly complete, about the 15th or 16th day, the disease was nearly gone; the incrustations having come away in large pieces—leaving the head perfectly sound beneath. The running of the ears in a few weeks was suspended, without any recurrence of the tinea; and the child continues perfectly well to the present time. After the 9th or 10th day, I desired the mother to expose her as much as possible to the small-pox. This she did with no effect from it.

Philadelphia, April, 1805.

An Account of a Case of Uterine Hemorrhage; and the Delivery of four Children at a Birth. By DR. JOSEPH L. THOMAS.

Quakertown, Bucks County, June 20th, 1805.

SIR,

HAVING observed by perusing the Medical Museum, your assiduity in collecting the most efficacious modes of treating diseases, and all such important cases as occur to practitioners, which would be useful, in improving the science of medicine; I am induced, from the general invitation given, to communicate the following singular case that occurred to me, June 16th, 1803, merely to shew the possibility of nature far exceeding the narrow limits of mankind's increase by one or two at a birth.

I was called upon to visit Mrs. L——, of this county, being then pregnant the fifth time; I found her in an extremely debilitated state; being reduced by a severe flooding that had taken place twenty-four hours before I came. It was first occasioned from an injury she received eight days before, by a sudden jolt, being almost thrown from a horse, which caused immediate pain in her back, and a slight hemorrhage from the uterus; but on the 13th she was so well recovered as to be enabled to walk out to her husband, working on the farm. It being a very warm day, the heat, and the exertions and agitation of body in walking, brought on a return of the complaint more severe than at first. A midwife was called upon, and every mean was used to check it, without effect, until the person appeared to be sinking fast. On the 14th I found her so reduced by the loss of blood, and the hemorrhage still continuing at each slight pain, occasioned by the small beginning of the uterus to contract; with extremities cold, and the pulse scarcely perceivable, as to make the case appear very doubtful.

I did not make any examination, being informed that she (by her reckoning) was between her seventh and eighth month;

and not observing any certain symptoms of labour, and considering nothing forward of that kind, I thought it proper to keep her in the most perfect tranquillity possible. I ordered warm flannels to the extremities; at the same time a bladder filled with cold water, with some crude sal ammoniac dissolved in it, was applied to the pubes. I then gave her small and repeated doses of pulv. ipecac. comp. designing it as a gentle sudorific anodyne, rendering the circulation more uniform and equable. In a short time all the alarming symptoms began to abate, and she became composed; a gentle moisture and warmth were felt over the extremities and system in general; the slight contractions of the uterus moderated, and the hemorrhage almost ceased. I then examined by touch, and found a small dilatation of the orificium uteri, but nothing presenting; she remained easy and composed; all the symptoms were favourable in the evening, and her strength gradually returning, enabled her to take at different times some weak nourishment.

It being a number of miles from the place where I live, I was fearful that my returning home at that time might prove unfavourable to the safety of the woman; expecting that if a return of the complaint should take place, the life of the person would be in imminent danger, if there should be no one present to effect a speedy delivery; as I suspected a partial separation of the placenta to be the cause.

I stayed there during the night; and next morning was awakened by one of the persons present, and informed that a return of the flooding had taken place, and that she complained of bearing down pains with regular intervals. By the touch I found the orificium uteri considerably dilated, and a small portion of the membranes presenting; I then proceeded to expedite delivery as soon as possible. The feet presented, and by an attempt they were brought down; the contractions of the uterus then increased; and as soon as the child entered the passage completely, the hemorrhage ceased, and she was delivered in the usual time required in such cases. Having separated the

cord I found that the placenta could not be brought down by gentle means, and the size of the abdomen being very little diminished, made me suspect another child, and on examination I discovered that my apprehensions were well founded: regular labour-pains came on, and she was delivered of the second by the feet. I still found that the bearing-down pains continued; and the placenta resisting being brought down, together with the bleeding of the cord, after the usual time, and the size of the abdomen but little diminished, made me suspect the third; she was in a short time delivered of the third male by the feet presentation, (the three being attached to the one placenta), it then came away without any difficulty. By the size of the abdomen there was reason to suspect the fourth. She was, however, so extremely reduced, as to make me fear for her safety. Regular pains soon recurred afresh, which induced me to delay placing her in bed. By examining I found the membranes of the fourth child protruding, and she was delivered by a natural presentation of a female child with its placenta. The placenta to which the three males were attached, was much larger than the other. The four were born alive, but lived only a short time. The males appeared to be nearly of the same size; the girl was not so large as the three sons.

A person seeing them afterwards, was so curious as to measure them, and found the largest to be seventeen inches from the top of the cranium to the soles of the feet.

She was, from extreme debility, restored to a moderate state of health; she became pregnant again, and was delivered of a male child in about fourteen months after the former singular case. The mother and child are in good health.

I am, sincerely,
Your well-wisher,
JOSEPH L. THOMAS.

Dr. John Redman Coxe.

Outlines of a new Theory of Chemistry. By N. C. VAN ECKHOUT: ----*communicated in a Letter to the* EDITOR, *from* THOMAS DANCER, M. D. *of Kingston, Jamaica; dated April 21st*, 1805.

THE new theory which I am about to propose, respecting the elements that compose all the substances in nature, may perhaps occasion some surprise, as it differs very materially from any other hitherto received; but although it may at first sight seem to militate against the established principles of Lavoisier, and other celebrated chemists of the present age, it is however, the result of inquiries I have been led into by their sublime discoveries. Far be it from me to suppose that I can eclipse the fame of these philosophers. If I have the good fortune to hit upon any thing new, the merit belongs to them, as it is by the light of their discoveries that I have been conducted. Happy should I think myself, could my researches contribute in any degree to the advancement of science, or the good of mankind. I have examined, with the greatest attention possible, the several substances entitled to be termed elements. To gain the end proposed, I have tried many new methods; but I have applied myself particularly to the analysis of those bodies that are in general considered simple, and have found that many of them are not so, but compounded of several elements; thus hydrogene is (I am convinced), composed of two substances, of which one is *carbone*, in a particular state, and which in this work is termed volatile carbone; the other substance entering into the composition of *hydrogene*, is what I shall denominate *alkaligene* or the base of alkalies of every kind. Having made this discovery, I have been led on to others no less interesting, and which serve to explain a variety of phenomena hitherto difficult to account for. In my researches, I have been obliged to desert the road laid down by others, and pursue a new one, which has led me to the conclusion, that there are but *four primary elements*, and that these, variously combined, constitute all the sub-

stances, animate and inanimate, upon the face of this globe. These four elements are, *oxygene*, *alkaligene*, *carbone*, and *azote*. These, in the state of gas, are perfectly homogeneous, but it is difficult to find any of them separate. Every substance in nature consists of nothing but the four primary elements before mentioned, in different states of combination. When these elements are found in bodies in a certain proportion, they are with difficulty separated. Such bodies are hardly to be decomposed by analysis, because their natural attractions are not to be disturbed; and these may be called the *ne plus ultra* of chemical combination.

A combination of only two or three of the elements is more easily changed, as the law of attraction by chemical means can be made to take place; they are each of them for the most part combined with others, for which they have the greatest attraction.

In combining with each other, they are capable of assuming seven different forms, viz. 1st, solid; 2d, concrete; 3d, liquid, or hydroform; 4th, natatilis atomiform; 5th, volatilis atomiform; 6th, gaseous; 7th, elementary gaseous. The primary elements have among themselves a mutual attraction.

They have, 1st, an homogene attraction; 2d, an heterogene, or an attraction of obligation; 3d, an elective attraction. By these several species of attraction with which the elementary particles of bodies are endued, all the substances with which we are acquainted, are formed, either by nature or art. *Oxygene* and *Alkaligene*, I consider as the primary, principal, or chief elements, or those which have the chief operation in the formation or disorganization of bodies, and I look upon carbone and azote as the satellites of the former, or subordinates to them; but though subordinate, *necessary*, as without these, the former would have no activity.

These four elementary substances, viz. oxygene, alkaligene, carbone, and azote, can each of them exist in three forms that are visible, and four invisible; the three first are, 1st, solid, 2d, concrete, 3d, liquid. The four invisible are, 1st, the

natatilis atomiform, 2d, volatilis atomiform, 3d, the compound gaseous, 4th, the elementary simple gaseous.

1st. By a solid, I understand every substance the particles of which cohere, and which is not easily acted on by chemical agents.

2d. By a concrete, I understand every substance the particles of which, in some degree, cohere; but which, notwithstanding, is easily acted on by acids or fluid alkalies, the solution being transparent.

3d. A fluid need scarcely be defined. Fluids are aqueous, spirituous, &c. and are always within a few degrees of the same temperature as the surrounding atmosphere.

4th. The natatilis atomiform state of bodies is that of solution, when the particles of a concrete substance have united with the liquid solvent, without disturbing its transparency. All saliform bodies, are of this state of natatilis atomiform.

5th. The volatilis atomic state of bodies is that, in which the particles are extremely fine, so as not to disturb the transparency of the atmosphere.

6th. The compound gaseous state of bodies is that, where different gases are mixed or combined together under various denominations.

7th. The simple gaseous state is that, where the prime elementary gas exists by itself uncombined.

I consider attraction as the first cause of motion, and motion as the first cause or generation of heat or caloric, which, whenever developed, is a certain sign of some change in the composition of bodies. It is in the deflagration of combustible substances that caloric is resolved in the greatest quantity, &c.

Oxygene. I consider oxygene as one of the primary elements, there being two elements of a secondary order, viz. carbone and azote.

Oxygene I look upon to be the agent which developes or engenders light, and as the cause of transparency in all diaphanous bodies.

It can exist under all the different forms before described, solid, concrete, &c. Moreover, oxygene combined with azote,

in various proportions, constitutes, all the different acids, which are stronger or weaker as they contain more oxygene and less azote: oxygene being the cause of light, may be named *phasoxygene.*

In the different sections of this chapter, in my proposed treatise, I have given an account of the principal combinations of oxygene and azote. I have considered azote as a secondary principle, and a satellite, or intimate attendant on oxygene, for it hardly ever abandons it; it enters into most of the combinations of oxygene, under the different forms of which oxygene is susceptible; when united with alkaligene in a gaseous state, it forms volatile alkali, either concrete or solid. Azote united with oxygene in a certain proportion, and in a gaseous state, forms all the acids. It is this principle united with the carbonic gas, that constitutes the different odours; it therefore may be called *odorogene.*

Alkaligene I consider as the other primary element in the first order: and as the name imports, it is the base of alkalies in general, caustic, or mild, according as they are united with more or less carbonic acid gas. The less an alkali contains of this, the more caustic it becomes. The carbonic acid gas should be named *oxy-carbone,* because it is formed of oxygene and carbone, and principally of the former.

I consider the oxy-carbonic gas as being always developed by some particular movement or attraction, and that it is never disengaged without the production of caloric, as we see in deflagration, fermentation, &c.

Oxy-carbone in a gaseous state is, by caloric, rendered the most expansive and penetrating of any gas known. It is this which occasions the breaking of glass vessels, when all the particles are not heated to the same degree at the same time.

When this gas is rarified to a certain degree, it loses all its specific gravity, it penetrates and passes through all bodies, and so becomes the vehicle or dispenser of heat or caloric.

Carbone may then be termed the principle of heat, *thermogene.*

In my chapter on this ſubject I have ſhewn all the principal forms of which carbone is ſuſceptible, in combination with the other elements.

The ſeveral elements have different degrees of attraction to, or for, each other, and undergo various metamorphoſes by their different combinations, and occaſion a ſeries of ſurpriſing phenomena hitherto unaccounted for. Theſe attractions were the firſt cauſe of movement among the particles of bodies, and perpetuate it; occaſion a developement or evolution of caloric; the compoſition and decompoſition of all bodies whatſoever; and form the infinite variety of compound matters in nature.

I perſuade myſelf, that when the foregoing theory is examined and better underſtood, it will be found to throw a new light on chemiſtry and medicine.

Obſervations on the Uſe of Nitric Acid in Hepatitis. By S. Firth, M. D.

Sir,

THAT hepatitis is a frequent and troubleſome diſeaſe in the Eaſt-Indies, is a fact long known; that mercury is almoſt a ſpecific for the cure thereof, is alſo equally well known; but practitioners are fully aware that caſes have, do, and may again occur, in which it would be improper to uſe this "Sampſon of the materia medica;" and that, owing to the prejudices of patients, it cannot ſometimes be adminiſtered, when no other impediment to its uſe exiſts. It becomes therefore of conſequence to be acquainted with other articles that may be equally efficacious to exhibit in theſe caſes. Of the numerous articles which have been tried, none have evinced ſuch powers as the nitric acid, and none have performed ſuch wonderful cures. The attention of medical men was called to this ſubject ſome

years ago, by Dr. Scott, an eminent practitioner at Bombay; but I do not think that his representations met with the attention which they so deservedly merited. I am convinced good nitric acid is one of the most valuable articles of the materia medica, and may be used with great advantage in *almost every* disease in which *mercury* is now given; and owing to its great tonic powers, it can be used in cases where the debility is so great as to forbid the use of the latter; and in hot climates, where great debility attends every disease, this virtue renders it the most valuable article the physician can prescribe. In cases of hepatitis, where the patient has a scorbutic habit of body, (and these cases are frequent amongst seamen in long voyages) the nitric acid can alone be used with success. It should be of the best kind, as I have found the common aqua fortis of the shops not to answer so well on several accounts, and it always contains a portion of muriatic acid, which is injurious in these cases. At first it should be given in small doses, frequently repeated, and largely diluted with water, and the dose gradually enlarged as circumstances may indicate the necessity thereof. After continuing the use of it for some time, the mouth becomes affected, the salivary glands enlarge, their secretion is increased, the gums swell, become sore, and a disagreeable taste is complained of, a slight degree of fætor is produced, but very different from that which is occasioned by the preparations of mercury—the pain of the side abates, and gradually becomes less troublesome, until it is felt no more, the pain in the shoulder subsides, the enlargement of the liver, which had previously taken place, ceases to proceed; it soon decreases to its natural size, and with it the nausea, oppression, and all the other disagreeable symptoms; the patient improves in health and strength continually, and from being debilitated, infirm and wretched, becomes healthy, vigorous and cheerful. The ptyalism produced is not so disagreeable as that arising from mercury, and is never followed by pains in the limbs; neither does it induce a predisposition to rheumatism, as many contend mercury does. It at the same time cures the scorbutic

habit the patient had contracted; but if the scurvy had broken out and made much progress, it will not effect a cure: the most in these cases that can be expected, is, the cure of the hepatitis, and the preventing the farther advance of the other symptoms, which can alone be cured by limes, lemons, and oranges, or living on fresh provisions. But certainly to cure hepatitis in a scorbutic patient, by nitric acid, is doing a great deal: mercury, in such a case, would only increase the symptoms, and hasten the fatal termination thereof. I have used the nitric acid with the happiest success in a number of cases, one of which I will relate.

William Woods, a seaman of the China, had an attack of the malignant fever soon after the ship left Batavia, of which he recovered, but continued very weak and feeble for a considerable length of time. During the passage between Balambuan and St. Helena, he complained of pain in his side, pain in the right shoulder, sometimes in the clavicle, sometimes in the scapula; he felt a sense of weight, and "dragging," as he expressed it, whenever he lay on his left side. Upon examination I found the liver *very much enlarged*, occupying a large part of the abdomen, and painful when pressed. The man was much debilitated, had night sweats, very feeble and quick pulse, flushed cheeks, or rather a circumscribed spot on each cheek, such as usually is seen in hectic fever; he complained of pains in his limbs, had a scorbutic eruption on his lower extremities, with purple spots on some parts of his body. I thought the case desperate, but determined to do all in my power to give him relief; and, upon considering his case maturely, thought nothing promised so fair to do this as the nitric acid. I accordingly prescribed a drachm of it to be diluted in a quart of water, and taken in the course of the day; the second day he took a drachm and a half in three pints of water; the third day, two drachms, as he had borne the first increase of the medicine very well. It was very grateful to his taste, and allayed his thirst. I continued the dose at two drachms for four days, when it was increased to two and

an half, diluted with three quarts of water, and taken for his conſtant drink through the day and night. In this manner the doſe was increaſed to half an ounce in the courſe of three weeks, beyond which I did not increaſe it. His ſtrength increaſed, his appetite returned, his ſcorbutic habit was almoſt gone, the medicine began to affect the gums, and at the end of the fourth week the pain in the ſhoulder had greatly diminiſhed, and was not troubleſome; the liver appeared to be decreaſed in ſize: he was in good ſpirits, ſpat freely, and ſaid he could lie on his left ſide without experiencing ſo much uneaſineſs. From this time the diſeaſed liver gradually diminiſhed in ſize, his health and ſtrength returned, and after continuing the medicine for nine weeks, he was diſcharged, perfectly cured.

I could add ſeveral other caſes in which it was equally efficacious in curing the diſeaſe, but it is unneceſſary; ſuffice it to ſay, that I have never failed with it, although I have no doubt that caſes may occur in which it will not ſucceed, particularly where *very extenſive ſuppuration* has already taken place, or where ſuppuration, combined with *ſcurvy*, in a very conſiderable degree exiſts; but in theſe caſes no medicines will effect a cure at ſea; and even if the patient is on ſhore, and has freſh animal and vegetable food, his chance of recovery is *very ſmall*.

With reſpect to the modus operandi of nitric acid, I muſt ſay I am doubtful. It is a tonic, every perſon muſt admit; that it is a ſtimulant, none can deny. It ſalivates; ſo in ſome inſtances does copper, and oxygenated muriatic acid; ſo does the beſt acetic acid; ſo will opium, cicuta, hyoſciamus niger, &c. when given to a certain extent. In this they all *appear to approach ſomewhat* towards the nature of mercury; yet every one admits them to be very different. Acids contain oxygene, mercury is only active in proportion to the quantity thereof that exiſts in its different preparations. But do opium and hemlock alſo contain oxygene? If not, does ſalivation depend upon oxygene in certain caſes, and not in others? It certainly muſt depend upon *ſomething* in common to all articles that ſalivate,

We know that seneka polygala, and several other powerful stimuli, will produce ptyalism. No person will contend, that seneka contains oxygene—but if we view the action of all these medicines, we will find they have one thing in common, *i. e.* they are all powerful incitants: but it may be asked, if ptyalism depends upon an incitant action, why do not all articles of that class salivate? Perhaps it may be owing to a *peculiar* stimulating power possessed by these articles, and not by the others. What is this peculiar power? I do not know: that it is *not* oxygene, I believe; but what it is I cannot pretend to say. There are many things which we know, but cannot explain. What is matter?—What is excitability?—What is life? We know all these to be; but where is the philosopher that can say in what they consist? So in like manner with the salivating principle: we know it is something: we know it must be possessed in common by several articles *apparently very different;* but what it is, as I have said in the beginning of this discussion, *I am uncertain.* I hope, Sir, some of your learned correspondents will solve my doubts. With this view I submit them to the public. Grateful for the information I have received from your valuable work, I remain,

With sentiments of the most profound respect and esteem,

Yours, &c.

S. FFIRTH.

DR. JOHN REDMAN COXE.

History of the Case of a very extensive Burn---successfully treated according to Mr. Kentish's method. By the EDITOR.

THE following case is so strongly in favour of Mr. Kentish's plan for the treatment of burns, that I feel assured its diffusion will be productive of advantage.

Anne M'Quicker, five years of age, living with Mr. Robert Smith, No. 28, south Second-street.—On the 11th January of the present year, her clothes, which were of thin calico, (a miserable dress for the inclement season), took fire whilst she

was sitting by the stove, and were nearly burnt off her back. The child ran in great agony into the street, in the midst of the snow; and by the endeavours of some to put out the flames, the clothes were stript off her, carrying with the cinders, the cuticle and skin in some places, to an extent of surface, whose circumference, *five feet* in length of string, would barely surround. She was taken into a neighbour's house, almost in a state of nakedness, and a most miserable spectacle, arising from the mixture of blood and half-burnt tinder, &c. adhering to this extensively injured surface.

A medical gentleman, then in the neighbourhood, recommended the application of cold milk to the burn, and laudanum to be used internally. As no advantage was derived from this, and as the child suffered the most violent pain, I was requested to see her, as I happened to be at one of the neighbours. Uncertain of meeting with the gentleman who had previously prescribed for the child, and anxious, if possible, to afford her some relief, I concluded to go, and found her, even worse than had been represented. She was suffering under one of the most violent chilly fits I ever witnessed, which seemed as if it would carry her off; and the pain of the burn appeared to be absorbed in the superior suffering from the chill; for she exclaimed continually (whilst her teeth were violently chattering in her head), "cover me! cover me!"—The burn extended from the right axilla, to below the great trochanter of the same side—over the right clavicle and breast, and beyond the sternum in some parts, over the abdomen beyond the linea alba and the upper parts of the pudenda—backwards it extended to the spine, nearly in a straight line down---and the greater portion of the inferior part of the arm was either raw or in blisters. The fire had extended its influence considerably beyond the boundary of the sore, as was evident from the erysipelatous blush, and from several small blisters scattered here and there.

It appeared scarcely possible that so young a child should survive so extensive a wound; and even if the first violence of the injury was overcome, it remained doubtful if the copious

suppuration would not be greater than she could support. Nevertheless, I felt persuaded that nothing could save her but the plan proposed by Mr. Kentish; and I ordered immediately the spirits of turpentine on rags to the whole surface of the sore. From the hurry, I neglected to have it warmed, which would probably have aided in sooner removing the chill. In the mean time she took thirty drops of laudanum, and the rags were kept constantly wet till the liniment was prepared, as a permanent application. The laudanum was repeated, as the chill did not entirely subside, and the pain continued violent several hours. She was directed the use of wine and water to drink; and the liniment was applied anew at bedtime, with some more laudanum; which relieved her, but did not prevent a restless night.

The following day (the 12th) the pain, though great, was much alleviated, and the liniment was continued with occasional doses of laudanum. She complained of great difficulty of swallowing, which was ascribed to the flame having been drawn into the fauces. 13th. Symptoms the same; slight appearance of suppuration; the blackness of the sore is now chiefly removed, by the tinder, &c. adhering to the ointment, and coming away with the dressing. On the 14th, suppuration commenced, and became daily more copious; she was now ordered laxative medicines, and put on a strict diet. One part was conspicuous, of about five or six inches diameter, on the lower part of the abdomen, bounded by the pubes, the linea alba, the ilium, and a line from thence to the navel, which seems to be so much destroyed that a deep slough may probably come away. As suppuration was now well advanced, I applied, about the 16th, Turner's cerate, chiefly as an estimate of the value of either application in such an extensive burn. The result was, the child was worse all day and night, with additional fever and pain, and considerable alteration in the healthy aspect of the sore. The liniment consequently was re-applied, with great relief: her bowels were moved with senna and manna, and by the next day things were as favourable as before.

20th. Pain still very considerable, from the great extent of

the sore, which precludes the smallest motion without rubbing some part of it. She is obliged to be lifted bodily out of bed, in order to be dressed, which causes much pain, as she is forced to stand the whole time. The suppuration became now very copious; I therefore again tried Turner's cerate, and chalk finely levigated; but the alteration for the worse in twenty-four hours was so great, that I was in no hurry to renew the trial. The turpentine liniment again restored its healthy state.

During all this time she was very strictly dieted, and so highly excitable was her system, that from foolishly giving her a small piece of a chicken, for dinner, which she thought she could eat; a violent degree of fever took place, which kept her restless and uneasy all night, with augmented pain of sore: and when dressed in the morning, in place of fine healthy granulations and suppuration, an ugly ill-conditioned ulcer, with sanious discharges, presented itself to view. Purging and close attention to diet, once more, in a short time, overcame this, and the edges were rapidly cicatrizing.

It was now thought advisable to get her into the hospital, as from the extent of the sore, it was presumed it would take a great while to heal; and she was admitted January the 31st. In a short time it became necessary to prescribe the bark in decoction, with jellies, &c. Serpentaria also, and other remedies calculated for the debilitated state of her stomach, were employed, by which she recruited; the sore healed rapidly under the use of Turner's cerate so that by the middle of March it was not larger than the palms of both hands, and confined to that part which I have stated, as being most injured by the fire. A solution of white vitriol at this time hastened its cicatrization; and on the 11th of May she was discharged cured. Had she not accustomed herself to pick the sore, it probably would have been well two or three weeks sooner; as for four or five weeks previous to this, it had not been more than from two to three inches in diameter. On measuring the circumference of the cicatrix before she left the hospital, it required a string of *four feet six inches* to surround it. I have above observed, that five feet would not have surrounded the extent of the injury sustained, in the

firſt inſtance, eſpecially if that of the arm is included, which in the preſent meaſurement is not adverted to.

The above inſtance, if I had had any doubts before of the efficacy of Mr. Kentiſh's plan of treating burns, would have completely ſilenced them; and it gives me pleaſure to add, that the phyſician who firſt preſcribed for the patient, and who had had frequent opportunity of ſeeing very extenſive injuries from burns and ſcalds, on the large plantations of ſome of the Weſt-India iſlands, was beyond meaſure gratified at the powerful and rapid effects of the plan purſued above, which he ſaid he ſhould have been fearful of uſing, had he not been convinced of its mildneſs and utility by ſo ſtriking an example. *

Philadelphia, July 1ſt, 1805.

Caſe of Mortification and Separation of the Body of the Uterus; alſo an Account of a monſtrous Birth. By Dr. J. Elmer.

A MIDDLE aged woman, the mother of ſeveral children, of a ſlender delicate habit of body, having been expoſed to many hardſhips by reaſon of her indigent circumſtances, was, after hard exerciſe, taken with a partial *procidentia uteri*. For want of proper aſſiſtance, an inflammation and ſphacelation of the *fundus uteri* ſucceeded, and after ſome days, about the ſize of a Spaniſh dollar, of that part of the uterus which was prolapſed without the vagina, ſeparated; upon which the inflammation ſubſided, and the woman ſoon became well without any help.

About two years afterwards, being obliged to travel ſeveral hundred miles in a horſe-cart, the fatigue of ſo long a journey, with the violent jolting of the cart, brought on a complete *procidentia uteri*; the whole uterus falling without the vagina,

* I cannot, from a review of the above, and other caſes of burns which have come under my notice, but proteſt againſt the plan propoſed by Mr. Earle of applying ice to burns, even of the moſt extenſive nature. I have never ſeen his work on the ſubject, and can judge of it only by partial extracts.

which was followed with a violent inflammation and swelling of the same, upon which I was sent for. When I visited the patient I found her labouring under a burning fever, sickness at stomach, weakness and great pain in the small of the back, and the prolapsed uterus swelled to the size of a large child's head, as black as a hat, of a cadaverous smell, and with every other mark of an incipient mortification; the poor woman being extremely dejected and despairing of any relief. As her pulse was very small and feeble, and the sphacelation so far advanced, I judged it not advisable to bleed, but ordered the parts to be continually fomented with a strong decoction of bitter herbs, and gave her frequent large doses of a nitrous julep, with a little lavender comp. in it. As she lived at a great distance from me, nothing more was done for her. About three days after I saw her, a separation of the whole body of the uterus, which was now growing putrid, began to take place, and in two or three days more, entirely sloughed off from the sound vagina; upon which the pain and fever abated; the patient recovered her health and strength; and the last time I heard from her, which was several months after this affair happened, she was in perfect health.

The following account of an imperfect fœtus may perhaps be thought worthy of notice:—

A married woman in the seventh month of pregnancy was seized with labour pains that brought on an abortion. She was first delivered of a perfect child, which lived several hours. This being come away, the midwife perceived another behind, of which with much difficulty she was also delivered; but instead of a perfect well-formed fœtus, it had the following appearance: the body was completely formed, and about the size of the other child's, but it was wholly destitute of a head, and had but one arm. The body appeared as if the head had been cut square off close to the shoulders, and in the place where the neck should be, there was a small spot about the bigness of an English crown, raw and bloody, having a fibrous appearance as though it had adhered to something. The side on which the arm was wanting was perfectly

ſmooth without any veſtige of an arm. The other arm was well formed as far as the hand, but it had no fingers, only two little fleſhy excreſcences, about half an inch long, growing in the place of fingers. Its legs were well ſhaped, but its heels grew where the inſtep ought to be, and it was deſtitute of toes, having only two fleſhy excreſcences on each foot, (ſimilar to thoſe on the hand) in place of toes. It had no umbilical cord nor placenta annexed to it. In the place where the umbilicus ought to be, or rather a little higher, there was a ſmall fleſhy production about two inches long, which being cut off appeared white and bloodleſs, having no marks of blood veſſels in it. The fleſh of its body appeared bloated, and felt harder than uſual, and its joints were ſo ſtiff as to be bent with difficulty.

I had no opportunity of examining it thoroughly, but am of opinion it adhered to ſome part of the placenta of the other fœtus, in the place where it appeared raw and lacerated, and that it received its nouriſhment *in utero*, by the ſmall blood veſſels in that part inoſculating with thoſe of the placenta.

Such imperfect productions as this ſhould teach us not to draw too haſty concluſions from preternatural appearances. The diſpute whether the fœtus *in utero* receives its nouriſhment by the mouth or umbilical veſſels, or both, has long ſubſiſted, and many arguments have been deduced on both ſides the queſtion from the mal-formation of the chylopoietic organs of fœtuſes. In the preſent inſtance it is very evident that it received its nouriſhment neither by the mouth nor umbilicus, for both of them were wanting. It muſt therefore have received it either in the manner ſome of the ancients ſuppoſe the fœtus to be nouriſhed, viz. by abſorbing the nutritious particles through the pores of the body in the ſame manner as a ſponge imbibes water, or elſe as above conjectured. The latter will perhaps appear the moſt probable.

J. ELMER.

13th September, 1773.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

Medical Graduation in the Univerſity of Pennſylvania.

AT a public commencement, held on the 5th of June, 1805, in the Univerſity of Pennſylvania, the following gentlemen were admitted to the degree of doctor of medicine, having reſpectively preſented, and defended their inaugural diſſertations, annexed to their names.

Joseph Klapp, of Albany, New-York. On the non-existence of an æriform function in the skin; and the impropriety of ascribing absorption to the external surface of the human body.

Benjamin Champneys, of New-Jersey. On dysentery.

Joseph Parrish, of Philadelphia. On the influence of the passions upon the body, in the production and cure of diseases.

Isaac Cleaver, of Philadelphia. On cataract.

William Gibbons, of Pennsylvania. On hypochondriasis.

Wakeman Bryarly, of Maryland. On the lupulus communis, of Gærtner; or the common hop.

Richard L. Savin, of Maryland. On the effects of cold in the cure of fevers.

George E. Mitchell, of Maryland. On the puerperal state of fever.

Elisha De Butts, of Maryland. On the eye and vision.

John T. Rees, of Maryland. On the medical theories of Brown, Cullen, Darwin, and Rush.

Joseph Hartshorne, of Alexandria, district of Columbia. On the effects produced by air upon living animals.

Thomas Ewell, of Virginia. On the stomach and secretion.

John Douglass, of Virginia. On mercury.

Henry P. Dangerfield, of Virginia. On cutaneous absorption.

Henry M. Gray, of Virginia. On cynanche trachealis.

John Esten Cooke, of Virginia. On the inflammatory bilious fever of 1804, in the county of Loudoun, Virginia.

James C. Madison, of Virginia. On the medical properties of iron.

William Howard, of Virginia. On the hydropic state of fever.

Lewis Burwell, of Virginia. On digitalis purpurea.

George Evans, of South-Carolina. On the rheumatic state of fever.

Daniel Legarre, of South-Carolina. On the effects of tobacco fumes on the system, and their use in cases of suspended animation from submersion.

George Cooke, of Georgia. On jaundice.

Felix Robertson, of Tennessee. On chorea Sancti Viti.

Thomas Smith, of St. Croix. On wounds of the intestines.

By ſome unaccountable miſtake, we find in many of the theſes, the day of commencement dated on the 3d of June.

Profeſſorſhip of Surgery.

A new profeſſorſhip (of ſurgery) has been lately eſtabliſhed in the univerſity, to which Dr. Phyſick has been appointed by the truſtees.

Election of Officers in the College of Phyſicians.

At the annual meeting of the college of phyſicians, for the election of officers, held on the 2d of July, 1805, the following gentlemen were choſen officers for the enſuing year.

Preſident———Dr. William Shippen. *
Vice-Preſident—Dr. Adam Kuhn.
Cenſors———Dr. Samuel Duffield,
Dr. Thomas Parke,
Dr. Caſpar Wiſtar,
Dr. Samuel P. Griffitts.
Treaſurer———Dr. Benjamin Say.
Secretary———Dr. Thomas T. Hewſon.

The Pennſylvania Academy of the Fine Arts.

It affords us great pleaſure in being able to ſtate, that a plan long ſince contemplated, has at length been carried into execution under very favourable auſpices, viz. the eſtabliſhment of an academy of the fine arts in the city of Philadelphia. A liberal ſubſcription has been realized, and directors have been choſen to carry the deſign into effect, who have forwarded an extenſive liſt for caſts from the moſt celebrated ſtatuary, to Paris, whilſt they are now intent on procuring the erection of a handſome building for their reception, which will do honour to our city, and doubtleſs aid the general deſigns of the inſtitution.

* Dr. John Redman, the venerable preſident of the college from its firſt inſtitution, having reſigned his ſituation previous to the election.

At a meeting of the members of the aſſociation for promoting the fine arts, held in Philadelphia the 21ſt of June, 1805, the following gentlemen were choſen officers of the inſtitution.

Preſident.

George Clymer.

Directors.

William Tilghman,	Joſeph Hopkinſon,
William Rawle,	Thomas C. James,
John R. Coxe,	C. W. Peale,
Joſeph B. M'Kean,	Moſes Levy,
John Dorſey,	William Meredith,
William Poyntell,	William Ruſh.

And at a meeting of the directors, Dr. Glentworth was choſen treaſurer, and William S. Biddle, ſecretary.

At the firſt meeting of the directors, our much eſteemed and celebrated countryman, Benjamin Weſt, Eſq. was unanimouſly elected an honorary member of the inſtitution.

Hoſpital eſtabliſhed at Natchez.

THE mayor, aldermen, aſſiſtants, medical faculty, and other citizens of Natchez humbly ſolicit the attention of the legiſlature of this territory to the following memorial:—

For the promptitude and zeal which your honourable body has already manifeſted to effect the eſtabliſhment of a hoſpital in our city, we beg leave to return you the moſt ſincere thanks. At the ſame time that it proves the intereſt you take in relieving the diſtreſſes of humanity, it precludes, to your memorialiſts, the neceſſity of expatiating on the extreme wretchedneſs and ſuffering that afflicted paupers in this place have experienced for want of ſuch inſtitution. Your memorialiſts, however, deem it their duty to ſubmit the following obſervations, as tending to ſave the time and leſſen the labour that would employ your honourable body in legiſlating on and inveſtigating this ſubject.

By referring to the reſolutions of the faculty which accompany this memorial, it will appear that it was hoped your honourable body would be pleaſed to ſolicit the aſſiſtance of the ſtates and territories bordering on the Miſſiſſippi and Ohio, as well as of congreſs. The juſtice and propriety of ſuch a demand, we humbly conceive, cannot be called in queſtion by any one who has ever viſited the city of Natchez, where a great number of poor tranſitory inhabitants of thoſe ſtates are at all times to be found; particularly during the moſt ſickly ſeaſon.

It will ſeem, no doubt, ſomewhat ſtrange, to thoſe who have not reflected particularly on the ſubject, that it ſhould be neceſſary to ſeek aſſiſtance from abroad for the mere purpoſe of erecting and ſupporting a hoſpital; but it will appear evident when we conſider the great coſt of building, of proviſions, and of every neceſſary article of expenſe; and particularly the high rate of ſervice in this country. To theſe conſiderations we may add, the exhauſted ſtate of our public treaſury, the ſmallneſs of our revenue, and the very great number of objects that require this ſort of charity. And here we beg leave to ſtate it as our humble opinion, that a competent hoſpital eſtabliſhment in this place muſt be nearly as extenſive as for the city of New-Orleans itſelf: for, although the number of reſident citizens bears no compariſon—although the concourſe of ſtrangers is not ſo great, nor the ſituation and climate ſo unhealthful; yet the number of ſick poor, deſtitute of every means of ſupport, is probably not much leſs. The cauſes of this, though not ſo obvious, are not leſs evident than the fact. It is well known to your honourable body, that boatmen from above conſtitute, in both places, the main body of the charitable objects that ought to be relieved by hoſpital inſtitutions. The very ſmall pittance they receive at New-Orleans for their ſervice in deſcending the river, is generally exhauſted before they reach Natchez on their return home. Add to this, their longer delay in this place, their having been longer expoſed to the influence of a warm climate, and the fatigue of a journey on foot. The number of thoſe who die here during the ſickly ſeaſon, for the mere want of comfortable lodging

and common attention, is indeed ſo great, that every one who has reſided a ſummer in Natchez, has had reaſon to ſhrink with horror at the ſpectacle. The common council attempted, the laſt year, to avert this evil as far as lay in their power, by appointing overſeers of the poor, inveſted with authority to provide for the ſick at the expenſe of the city treaſury: but notwithſtanding the exertions of the overſeers were inceſſant, and the whole amount of revenue overrun by upwards of five hundred dollars, they had the mortification to find that, for want of a hoſpital inſtitution, the ſum of human miſery was not much diminiſhed.

Your honourable body will have a right to expect from us, who have long contemplated this ſubject, and eſpecially from thoſe among us who have ſome acquaintance with hoſpital inſtitutions, an eſtimate, however vague, of the probable expenſe it will incur. The idea will naturally preſent itſelf, that, as the trade from above is rapidly increaſing, as alſo the growth of the city of Natchez and the population of our territory, what would now be a competent eſtabliſhment, muſt, in the courſe of a few years, be very inadequate; and conſequently, that an endleſs repetition of demands will be made. But we entertain a ſanguine hope, that any future increaſe of expenſe will be amply ſupported by means of the donations and legacies that ſuch charitable and laudable inſtitutions never fail to receive.

In endeavouring to form an eſtimate of the probable expenſe, we ſhall confine ourſelves to a ſtatement of what we ſuppoſe will be the leaſt and moſt frugal competent eſtabliſhment.

	Dollars.
We conceive a ſufficient building cannot coſt leſs than	10,000
The bedding, kitchen utenſils, and houſehold furniture, - - -	1,500
The firſt ſupply of medicine and ſurgical apparatus,	500
Total amount of immediate expenſe, -	12,000

Wages of an overseer,	- -	750.
——— of a matron,	- -	180
——— of two servants,	- -	150
Marketing—say two dollars per day,	-	730
Groceries of all kinds,	- -	750
Medicine,	- - -	200
Wood and water,	- -	250
Burial, waste, repairs, and all other contingencies,		800
		3,810
Deduct for board of a certain description of patients,		810
Total amount of annual expense,	-	3,000

The disposition your honourable body has already discovered to support and countenance the institution, forbids us to petition you in a particular manner to make some appropriation for its promotion.

The subscription papers herewith accompanied, you will perceive, were originally intended to be submitted to the care and patronage of your honourable body. The subscriptions have been obtained in haste, and with little exertion: and we do not hesitate to give it as our opinion, that a much larger amount may be yet obtained in this way in this territory and from abroad. Wherefore we beg leave to suggest the propriety of immediately appointing trustees, and investing them with such powers as your honourable body may conceive most conducive to the interests of the institution.

An ACT to establish a Hospital in the City of Natchez, and for incorporating Trustees of the same.

Whereas great numbers of sick and distressed boatmen employed in the navigation of the river Mississippi, and other indigent persons destitute of the means of procuring medical assistance are found in the city of Natchez and other parts of this territory, for the relief of whose wants private charity and present legal regulations are inadequate; and subscriptions to a considerable amount having been raised, and the sum of one thousand dollars bequeathed by the late George Cochran, Esq.

for the purpoſe of eſtabliſhing a hoſpital in ſaid city: and whereas David Lattimore, Garret E. Pendergraſt, William Lyon, Joſeph Macrery, James Speed, Andrew Macrery and Frederick Seip, phyſicians of that place, have humanely proffered their profeſſional ſervices gratis, for the benefit of ſuch an inſtitution:

Sec. 1. *Be it therefore enacted by the Legiſlative Council and Houſe of Repreſentatives of the Miſſiſſippi Territory, in General Aſſembly convened*, That there be erected and eſtabliſhed in the city of Natchez, a hoſpital for the reception and relief of indigent boatmen and other paupers of every deſcription in this territory, who may be in want of medical aid and aſſiſtance, and who, if without the limits of the city, may be ſent thither by order of any juſtice, at the expenſe of his proper county; to be called and known by the name of "Natchez Hoſpital," to be under the care, government and regulation of a body politic and corporate, as herein after provided.

Sec. 2. *And be it further enacted*, That John Steel, Adam Bingaman, William Brooks, William G. Forman, Abijah Hunt, John Girault, Ferdinand L. Claiborne, Samuel Poſtlethwait, jun. John Henderſon, and Job Ruth, together with the mayor of the city of Natchez for the time being, be, and they are hereby created a body politic and corporate, by the name of "The Preſident and Truſtees of the Natchez Hoſpital;" and that they and their ſucceſſors duly elected members of the ſaid corporation, ſhall be and remain a body politic and corporate by that name forever; and they and their ſucceſſors ſhall be perſons in law capable of ſuing and being ſued, pleading and being impleaded, in all courts and places whatſoever, and may have a common ſeal, and alter and change the ſame at pleaſure; and they and their ſucceſſors ſhall by the ſame name in law be capable of receiving, purchaſing, holding and conveying any eſtate real or perſonal for the inſtitution and uſe of ſaid hoſpital; and all ſubſcriptions, donations, grants, gifts, bequeſts and deviſes, made or that may be made, for the inſtitution or uſe of ſaid hoſpital, ſhall appertain to, and veſt in ſaid corporation by the aforeſaid name, for the uſe and benefit of

ſaid hoſpital, and for effecting the purpoſes and intentions of the donors and grantors.

Sec. 3. *And be it further enacted*, That the number of ſaid truſtees, including the preſident, ſhall not exceed eleven, ſix of whom ſhall be a quorum to do any buſineſs in their corporate capacity; and the mayor of the city of Natchez ſhall *ex officio* be preſident, but in his abſence a preſident *pro tempore* may be elected; and ſaid preſident and truſtees ſhall have power, from time to time, to fill up all vacancies that may happen in ſaid corporation, by the election of ſuitable perſons as ſucceſſors, and they ſhall have power and authority to determine the time and place of their meetings, and the manner of notifying the ſame.

Sec. 4. *And be it further enacted*, That ſaid preſident and truſtees ſhall elect from their own body, a treaſurer, who ſhall give bond and ſecurity to ſaid corporation, in the ſum of ten thouſand dollars, conditioned for the faithful performance of the duties of his office, and for rendering a juſt and true account of all monies, ſecurities and property of every kind coming into his poſſeſſion as treaſurer, when and as often as thereto required; and all deeds ſigned and delivered by ſaid treaſurer, by order of ſaid preſident and truſtees, ſealed with their ſeal, ſhall, when made in their corporate name, be conſidered in law as the deed of ſaid corporation; and all monies, ſecurities and other property of ſaid preſident and truſtees, coming into the hands of ſaid treaſurer, together with all books in which his accounts, as treaſurer, are entered and kept, and all papers and vouchers thereto appertaining, that may be in his hands at the expiration of his office, ſhall, on demand of him, his executors or adminiſtrators, be paid and delivered over to his ſucceſſors; and all monies recovered on the treaſurer's bond, ſhall be paid to the preſident and truſtees, for the uſes, and ſubject to the appropriations aforeſaid.

Sec. 5. *And be it further enacted*, That ſaid preſident and truſtees, ſhall have power and authority, from time to time, and at all times hereafter, to employ phyſicians and ſurgeons to attend ſaid hoſpital, with ſuch powers and under ſuch regulations as ſaid preſident and truſtees ſhall deem expedient;

Provided, That ſuch phyſicians and ſurgeons ſhall be of the city of Natchez, ſo long as the medical faculty in that place will attend the inſtitution gratis. And ſaid preſident and truſtees ſhall have power and authority to elect and appoint managers, overſeers, or ſtewards of ſaid hoſpital, and all neceſſary officers and ſervants, to declare the tenures, ſalaries, emoluments and duties of officers, to determine the mode of aſcertaining what deſcription of perſons or patients are entitled admiſſion into ſaid hoſpital, and to benefits of the inſtitution gratis, and what deſcription of perſons or patients ſhall be admitted on terms of compenſation and the quantum thereof, to make and ordain all reaſonable rules, ordinances and bye-laws (not repugnant to the ordinances and laws of this territory) with reaſonable penalties for the good government of ſaid inſtitution.

Sec. 6. *And be it further enacted*, That ſaid preſident and truſtees be, and they are hereby empowered, to erect and keep in repair, one or more houſe or houſes for a hoſpital, and ſuch other buildings as they may deem neceſſary for ſaid inſtitution.

Sec. 7. *And be it further enacted*, That the legiſlature of this territory may grant any further powers to, or alter, limit, annul or reſtrain any of the powers by this act veſted in ſaid corporation, as ſhall be judged neceſſary to promote the benevolent objects and beſt intereſt of ſaid inſtitution.

Sec. 8. *And be it further enacted*, That there be and hereby is granted to the preſident and truſtees of the Natchez hoſpital, for the uſe and benefit, and for the purpoſe of ſupporting the ſame, the annual ſum of one thouſand dollars, to be paid out of the treaſury of this territory, for the ſpace of five years from the firſt day of May next enſuing.

PHILANDER SMITH, *Speaker of the Houſe of Repreſentatives.*

JOHN ELLIS, *Preſident of the Legiſlative Council.*

APPROVED, January the 18th, 1805.

CATO WEST, *Secretary of the Miſſiſſippi Territory, acting as Governor of the ſame.*

A Statistical Table for the United States of America, published annually to promote Statistical Inquiry. By S. BLODGET, jun.

YEARS.	POPULATION.				Averaged price lands.		Militia.	Navy United States.		Seamen.	IMPORTS.		EXPORTS.		Tons, merchant vessels on which duties were collected.	Averaged labour per day.
	Free persons.	Slaves increase near 2 1-2 per cent. per annum.	Total population, including Louisiana, in the year 1804.	Total increase in each year.	Improved lands, part of 640 millions of acres.	Cultivated per acre.	In their natural state.	Vessels.	Guns.		Emigrants, besides 4500 Slaves imported in 1804.	Merchandize, including emigrants' slock, furnitures, &c.	Domestic produce.	Total Exports.		
						d. cts.	d. cts.						Dollars.	Dollars.		Cts.
1774	1 986 000	500 000	2 486 000	— —	2	20	86 000	2 50	— 35	421 300	— —	15 000	3 000	7 000 000	6 100 000	198 000	30
1784	2 650 000	600 000	3 250 000	— —	3	21	500 000	2 25	— 40	541 666	— —	18 000	5 000	11 000 000	10 150 000	250 000	50
1790	3 232 303	697 697	3 930 000	— —	3	30	000 000	2 10	— 35	654 000	— —	25 000	3 500	17 500 000	14 200 900	486 890	50
1791	3 333 761	714 139	4 047 900	117 900	4	31	000 000	3 20	— 55	677 650	— —	28 000	4 000	19 000 000	14 600 000	502 698	60
1792	3 438 237	731 000	4 169 337	121 337	4	32	000 000	3 50	— 65	694 889	— —	30 090	5 000	22 000 000	15 420 000	567 698	65
1793	3 446 417	748 000	4 294 417	125 180	4	33	500 000	4	— 95	715 736	— —	33 060	3 600	26 000 000	15 420 000	627 670	70
1794	3 657 189	766 000	4 423 249	128 632	4	34	000 000	4 50	1 20	737 208	— —	39 900	3 500	34 000 000	16 200 100	33 043 725	628 617	100
1795	3 771 946	784 000	4 555 946	132 697	4	34	550 000	4 60	1 25	759 324	— —	45 000	3 900	48 000 000	18 064 050	46 855 556	747 964	100
1796	3 890 124	802 500	4 692 624	136 678	4	35	100 000	4 75	1 40	782 104	— —	51 500	4 500	68 000 000	20 024 021	67 064 097	831 900	100
1797	4 012 902	820 500	4 833 402	140 776	4	35	600 000	5	— 1 50	805 567	3	124 60	200 3	500 52 000 000	24 052 671	51 294 710	876 912	90
1798	4 940 404	838 000	4 978 404	145 002	4	36	100 000	5	25 1 60	829 734	13	350 62	300 3	800 63 000 000	27 991 413	61 327 411	893 329	85
1799	4 273 756	854 000	5 127 756	149 352	5	36	300 000	5	50 1 70	854 626	42	950 63	500 4	000 79 500 000	33 142 187	78 665 522	920 000	100
1800	4 404 798	876 799	5 281 588	153 832	5	36	800 000	5	50 1 90	878 000	42	970 64	000 3	800 71 800 000	31 840 903	70 971 780	972 492	90
1801	4 544 800	898 300	5 440 100	158 512	5	37	400 000	5	60 2 —	914 001	20	600 65	000 4	000 88 900 000	46 377 792	93 020 515	947 576	80
1802	4 682 313	921 000	5 603 313	163 213	5	38	000 000	5	70 2 5	940 000	20	600 63	000 4	500 73 000 000	36 182 073	71 957 144	1 003 002	75
1803	4 727 412	944 000	5 771 412	168 099	5	38	500 000	5	85 2 10	972 000	18	556 63	500 3	900 56 000 000	42 205 961	55 800 033	1 107 323	75
1804	5 000 100	999 900	6 000 000	228 588	6	38	950 000	6 —	2 15	1 050 000	20	560 64	000 5	000 80 000 000	41 477 479	77 699 074		75

YEARS.	Averaged wheat per bushel.	REVENUE.		EXPENDITURE.		MONEY.		Number of Banks.	Stocks, paſſing as money, part held in Europe.		Deduct from the debt.			Lands ſold, to diſcharge the United States debt.	
		Impoſt on merchandize and tonnage.	Total annual receipts.	Civil liſt and contingencies.	Total expenditure.	Metallic medium.	Bank notes in circulation.		Banking capital.	Nominal public debt.	Active ſinking fund, and reimburſements.	Cuſtom houſe bonds and caſh in the treaſury.		Number acres ſold to pay the public debt, at 2 dollars 6 dollars the acre.	Proceeds of ſales.
	Cts.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.		Dollars.	Higheſt war debt.	Dollars.	Note. *Bonds are undervalued per eſtimate.*			
1774	60	—	—	—	—	4 000 000				200 000 000					The ſales
1784	65	—	—	—	—	10 000 000	2 000 000	3	2 150 000	Funded.					of Lake
1790	75	—	—	946 841	—	9 000 000	2 500 000	4	2 550 000	72 237 301					Erie lands
1791	75	—	4 771 200		3 797 436	16 000 000	9 000 000	6	12 950 000	76 781 953					are not in
1792	80	3 443 073	8 771 600	400 458	8 962 920	18 000 000	11 500 000	16	17 150 000	77 124 300					this ſtate
1793	95	4 255 306	6 450 195	436 853	6 479 977	20 000 000	11 000 000	17	18 000 000	78 402 946	2 019 184	6 000 000			ment.
1794	100	4 801 065	9 439 855	443 031	9 041 593	21 500 000	11 600 000	17	18 000 000	79 424 668	2 265 022	8 000 000			
1795	120	5 588 461	9 515 758	417 362	10 151 240	19 000 000	11 000 000	23	19 000 000	84 980 438	3 254 235	10 000 000			
1796	100	6 567 987	8 740 329	507 747	8 367 776	16 500 000	10 500 000	23	19 200 000	83 404 139	3 600 344	11 000 000			
1797	150	7 549 649	8 758 780	540 408	8 625 877	16 000 000	10 000 000	25	19 200 000	81 324 139	4 549 627	12 000 000		A ſale at	
1798	190	7 106 061	8 179 170	664 408	8 583 618	14 000 000	9 000 000	25	19 200 000	11 244 139	5 233 174	12 000 000		Pittſburg	Dollars.
1799	200	6 610 449	12 549 381	568 199	11 004 965	17 000 000	10 000 000	26	21 200 000	88 456 038	9 052 232	12 000 000		130 000	
1800	200	9 080 932	12 413 978	805 051	11 952 534	17 500 000	10 500 000	28	21 350 000	89 443 487	9 274 607	12 000 000		acres, at	268 509
1801	175	10 750 773	12 945 455	692 821	12 273 376	17 000 000	11 000 000	31	22 400 000	88 745 704	10 876 686	13 500 000		398 640	1 203 509
1802	130	12 438 235	14 995 793	596 981	13 270 457	16 500 000	10 000 000	32	22 600 400	87 451 521	12 013 777	14 500 000		738 666	1 883 509
1803	125	10 479 417	11 064 097	526 748	11 058 983	16 000 000	11 000 000	36	26 000 000	98 196 018	14 413 000	15 500 000		919 727	2 248 502
1804	155					17 500 000	14 000 000	59	39 500 000			16 500 500		1 232 978	2 888 509

National funds.—*Appropriated by law to the diſcharge of preſent and future public debt.*—Stocks drawing intereſt purchaſed by the Commiſſioners of the ſinking funds with ſpecie by law of the United States, of Auguſt, 1790, with the ſurplus duties by law of May, 1792, with proceeds of the public lands, &c. 7,024,450 Dolls.—4,500 lots in the city of Waſhington, 1,500,000—235 millions of acres of land, limited by law at not leſs than 2 dollars per acre to net in time 470,000,000.—Half of the United States Louiſiana lands at the ſame limit may net for poſterity 600,000,000.

Plan of a Code of Health and Longevity.

The following is extracted from a "Proſpectus of a new work, to be intitled The Code of Health and Longevity, by Sir John Sinclair, Bart." A gentleman well-known for his ſtatiſtical inquiries, and various philoſophical purſuits.

Sketch of the Plan.

THE medical authors who have hitherto written on health, have commonly reſtricted their obſervations to ſix general heads: 1. Air; 2. Diet; 3. Motion and Reſt; 4. Sleeping and Watching; 5. Retention and Excretion; and 6. The Paſſions of the Mind. To theſe they have given the ſingular name of the ſix NON-NATURALS, from the idea, that though, if they were managed with prudence, they might be entitled to the name of Naturals, yet as they are much oftener abuſed, and thence are the ſource of various diſorders, they are more frequently acting againſt, than with nature, and therefore may be properly termed *Non-Naturals*.* Some authors on health have alſo gone into the diſcuſſion of what they call *Non-Neceſſaries*†, in which they include clothing and the profeſſions of life. But as ſuch a mode of explaining the doctrines of health and longevity, is in many reſpects defective and exceptionable, it is not propoſed to adhere to it upon the preſent occaſion.

The moſt natural diviſion of the ſubject under conſideration, ſeems to be, to point out,

1. The circumſtances which neceſſarily tend to promote health and longevity, independent of individual attention.

* Lynche's Guide to Health, p. 61. Mackenzie, in his Hiſtory of Health, Introd. p. 4. gives a different account of the compound word *non natural*, which, he ſays, originated from the jargon of the Peripatetic ſchools. It was firſt mentioned by Galen, who divides things relating to the human body into three claſſes: Things which are *natural* to it; things which are *non-natural*; and, things which are *extra-natural*. (Claſs 7. lib. de Oeul. Partic. tertia, c. 2. From this fantaſtical diſtinction, the epithet non-natural, he ſays, firſt aroſe.

† Strother's Eſſay on Sickneſs and Health, p. 445.

2. The rules, which, if obſerved by an individual, have a tendency to preſerve health and exiſtence, even where theſe independent circumſtances are wanting. And,

3. The regulations by which the general health and ſafety of a great community are protected from the various injuries to which they are likely to be expoſed.

PART I. *Circumſtances which neceſſarily tend to promote Health and Longevity.*

It will hardly be diſputed, that while individuals differ ſo much from each other with regard to a variety of important particulars, as the climate in which they reſide, the manner in which they are formed, &c. that there muſt neceſſarily be a material difference with reſpect to the duration of their lives. It is eſſential therefore, in the firſt place, to aſcertain, what theſe particulars are. It ſeems to me that they may be all comprehended under the following general heads:

1. Form and growth of the individual. 2. Natural conſtitution. 3. Diſpoſition of mind. 4. Parentage. 5. Climate. 6. Education. 7. Rank in life. 8. Particular occupation. 9. Connubial connexion. And, 10. Sex.

Where a favourable condition of all, or the greater part of theſe circumſtances occur, there, health and longevity may be expected.

In ſome particular caſes alſo, it may be proper to remark, that nature ſeems to make a freſh effort, and in ſome meaſure to renew the diſtinctions of youth, and ſome of the circumſtances which attend it.

PART II. *Rules for preſerving Health and promoting Longevity.*

It is evident, that if men lived uniformly in a healthy climate, were poſſeſſed of ſtrong and vigorous frames, were deſcended from healthy parents, were educated in a hardy and active manner, were poſſeſſed of excellent natural diſpoſitions, were placed in reſpectable ſituations in life, were engaged only in healthy occupations, were happily connected in marriage, &c.

&c. there would be little occaſion for medical rules. But it is univerſally known, that ſome individuals enjoy only a part of thoſe advantages, whilſt others poſſeſs hardly any of them complete. Hence ariſes the neceſſity of attending to thoſe *rules* which obſervation and experience have pointed out as being the moſt likely to counteract the diſadvantages ariſing from ſo material a want as of any of the natural advantages above enumerated. Theſe rules relate to

1. Air. 2. Diet. 3. Digeſtion, and its effects. 4. Clothing. 5. Habitation. 6. Exerciſe of the mind. 7. Exerciſe of the body. 8. Sleep. 9. Amuſements. 10. Habits. 11. Temper, or diſpoſition. And, 12. Medicine.

To which will be added, ſeveral rules of *a miſcellaneous nature*, concerning the means of alleviating the effects of the various accidents to which perſons are expoſed; together with obſervations on the neceſſity of adhering to different rules according to climate, peculiar occupations, &c.

PART III. *Regulations for the Health of the Community.*

It is in vain, however, that either nature has formed an individual for long life, or that he obſerves all thoſe rules which are neceſſary for the preſervation of health, unleſs attention be paid by the government of a country, to the happineſs and ſafety of its ſubjects. This is a point which has ſeldom been attended to in the manner in which its importance deſerves. While the attention of lawgivers is unceaſingly directed to a variety of leſs important objects, thoſe regulations on which the ſafety of the people at large depend are unfortunately neglected. Yet what can be more pernicious, than to ſuffer the climate of a country, for inſtance, to continue noxious to the health of its inhabitants, merely for want of drainage, cultivation and improvement, when thouſands of inſtances might be adduced of the advantages which have reſulted from the adoption of an oppoſite ſyſtem? What can be more impolitic, than to permit unwholeſome proviſions and other articles, to be ſold, without puniſhing thoſe who thus attempt to injure the

health, perhaps to deſtroy the exiſtence, of their fellow-creatures? What more dangerous, than to permit public amuſements of a pernicious nature; to authoriſe improper cuſtoms; to neglect the education of youth, when the foundation ought to be laid of their future health and ſtrength; to ſuffer public inſtitutions to become the ſeminaries of diſeaſe; to diſregard the ſafety of thoſe who are trained for the public defence; to ſanction the ſale of noxious or doubtful medicines; and, above all, to permit the leaſt riſk of contagious diſorders being admitted into a country, by which its whole population may be affected?

The police of public health, therefore, is a moſt important branch of the propoſed inquiry; and the events which have recently happened in Spain and at Gibraltar, have given it additional intereſt. It may be treated of under the following general heads:

1. Police of climate. 2. Police of phyſical education. 3. Police of diet. 4. Police of public amuſements. 5. Police of habits and cuſtoms. 6. Police of public inſtitutions. 7. Police for the health of ſailors and ſoldiers. And, 8. Police of medicine and the means of promoting its improvement.

Conclusion.

Such is the plan of the intended work, which others might doubtleſs have executed with more ability, but none with a more anxious wiſh, that it may prove *ſubſtantially ſerviceable* to the intereſts of human nature; or, at any rate, uſeful to thoſe, who may apply their talents, to render the inveſtigation therein carried on, ſtill more complete.

Converſion of Animal Matter into Adipocire.

"AN extraordinary diſcovery was lately made in a courtlage, on a riſing ground belonging to Chapel Farm, in the pariſh of Cruwys Morchand, near Tiverton. The houſe and eſtate are the property of Mr. Brooks, a wealthy and reſpectable farmer, who reſides there. It was formerly a monaſtery

belonging to the Auguſtine friars; and, at the diſſolution of the religious houſes, fell into the hands of the Cruwys's, from whom, by various alienations, it came to the preſent poſſeſſor. In order to convert a very fine ſpring into a pond, to water the meadows below, and alſo for the uſe of the cattle, Mr. Brooks diſmantled the courtlage, the linhays, ſheds, &c. and began to ſink an extenſive pond. When the workmen had ſunk about ten feet from the ſurface, the ſtrata appearing in a natural ſtate, they came to a ſpongy matter; it appeared to be a very thick cuticle of a brown colour. They ſoon found bits of bones, and lumps of ſolid fat, of the ſame colour. Aſtoniſhed at this diſcovery, one of them ran for his maſter, who, upon viewing the place, ſent for Mr. Sharland, a perſon of great experience and practice as a farrier, in the neighbourhood. It was then reſolved cautiouſly to work round the carcaſe; and at laſt the complete body of a hog was found, reduced to the colour and ſubſtance of an Egyptian mummy: the fleſh was ſix inches thick, and the hair upon the ſkin very long and elaſtic. As the workmen went on further, a conſiderable number of hogs, of various ſizes, were found in different poſitions; in ſome places two or three together; in other places ſingly, at a ſhort diſtance. Upon the bodies being expoſed in contact with the open air, they did not macerate nor reduce to powder, as is uſually the caſe with the animal economy after lying two or three centuries diveſted of air; perhaps this may be occaſioned by the mucilage of the bacon. This piggery continued to the depth of twelve feet, when the workmen ſtopped for the ſeaſon, and the pond was filled with water. The oldeſt man in the pariſh had never heard that the ground had ever been broken; and, indeed, the ſeveral ſtrata being entire, renders it impoſſible to conjecture from what cauſes this extraordinary phenomenon can be accounted for. The Cruwys have a complete journal of remarkable events which have happened in the pariſh for three centuries; and not the leaſt mention is made of any diſorder which could occaſion ſuch a number of ſwine to be buried in ſuch a ſituation."

Annual Review.

Obſervations on Quackery.

" HERE let me beg the reader to conſider the power and province of mere rules in practical affairs of the eaſieſt kind. No one has, I ſuppoſe, yet come forward with pretenſions to teach the coarſeſt handicraft by a book. But in the tumult of literary projects, amid which we live, ſcarce any abſurdity being impoſſible, let us imagine ſome adventurer, ſufficiently intoxicated to undertake to communicate the capacity for exerciſing one of our humbleſt, and moſt uſeful trades, without apprenticeſhip, by a tract on *domeſtic ſhoe-making*. Should any one, after ſtudying this tract, conceit himſelf qualified to handle the awl and the paring knife, I leave it to be imagined by the reader, how unmercifully the leather would be pricked and ſlaſhed, and what would be the condition of the poor toes, condemned to be lodged in the receptacle, prepared by theſe learned hands. Does common ſenſe ſpurn at the idea of efficacious inſtruction in ſuch an art by ſuch means? Are the qualities, then, of leather more complicated than thoſe of the living body? Does the art of managing the former to moſt advantage require a long apprenticeſhip, and not that of managing the latter? Are the tools that lie within the compaſs of the ſhoemaker's bench, more eaſy to employ properly, than the articles of the materia medica? I ſee, indeed, one eſſential difference: the incompetent mechanic will ſoon be marked; no clumſy workmanſhip of his can paſs: whereas, in medicine, bunglers may go on, I know not how long, without diſgrace. This chance of eſcaping detection is, no doubt, an encouragement for *private practitioners*, ſuch as nothing can countervail, if they be agitated by the ſame reſtleſs dæmon that poſſeſſed Lord Cheſterfield's blood-letting peer. But I have no hope of effecting any thing, except with active, but miſguided benevolence. Inſanity muſt be differently dealt with, and wrong-headedneſs is ſcarce to be reclaimed by plain dictates of prudence. Otherwiſe, a conſideration, yet untouched, would be deciſive! For the defect of the artiſan, who leaves his work imperfect, can be afterwards ſupplied. But an amending hand may be vainly

applied in case of omission during sickness, where it is often just as fatal to leave undone what is right, as to do what is wrong. What then shall we think of the defence, which conscious incapacity is so apt to set up by anticipation: very simple my advice is: you may be sure, if it does no *good, it can do no harm!* Oh, yes, but if it does no good, it *can* do harm—all possible harm, provided in killing there be harm. It can arrest the rescuing hand, till the silent, but progressive finger of fate move from, *time is*, to, *time is no more*. There are plenty of occasions on which water-gruel, upon this harmless principle, will do a man's business just as effectually as laurel-water. And what, I pray, does it signify to the killed, whether they come to their end by the sauce-pan or the still? To the killer, the difference, we know, is all in all. Yet he who simply thrusts his ignorance between the sick, and the means of recovery, will really have done more mischief, inasmuch as he will have more largely accumulated pain upon death. And surely, where law cannot interfere, the call is so much louder for public censure. It is by far too unequal a game to be allowed in society, where one party stakes empty professions of good-will against the other's existence." *Beddoes' Hygeia.*

Patent for Bleeding with Leeches!!!

It appears by the papers of late, that a person of this city has procured a patent for the bleeding with leeches, than which a more knavish piece of monopoly was scarcely ever known. That the United States should, for the benefit of an individual, commit itself in a way which must evidently prove detrimental to hundreds, is certainly matter of deep regret, as it does not evince any solicitude for the mutual advantages of all its members. That a person should have the effrontery to endeavour to obtain a patent, for what has now for many years been publicly practised both in this city and in Europe, does not surprise; but the weakness or ignorance evinced in granting it, is truly wonderful. It would certainly have been wise in those who have the privilege of granting patents, to have first ascertained what they were about to do, as it is believed it would readily have appeared to them, that this was

above the powers which they poſſeſs. They might as well pretend to grant a patent for bleeding with a lancet, or by means of cupping-glaſſes; and it would be but proper for the whole body of medical men to evince their diſlike of ſuch unjuſt and illiberal conduct, by withholding from the perſon alluded to, all the ſupport in their power. A court of juſtice ſo far from aſſigning any forfeit to him for an encroachment on his privileges, would rather fine him for encroaching on the privileges of the multitude.

It would be ſatisfactory to know what ſucceſs has attended our adventurer in his *breeding of leeches*, to which we are informed his patent extends! If the United States poſſeſs the power of granting the privilege of *breeding by patent*, we may reaſonably entertain hopes of ſupplying in a few years the unſettled parts of our country with a ſufficiency of *live ſtock* of all deſcriptions, without further importation!!! *Editor.*

Corroſive Sublimate to preſerve from putrefaction.

As it is of much conſequence to have an eaſy and cheap method of preſerving anatomical and morbid preparations, it is preſumed the following will be of ſervice, in precluding the uſe of ſpirits, which, from the neceſſity of frequent renewal, owing to evaporation, &c. is rendered very expenſive.

The following is taken from a "Memoir lately publiſhed by Cit. Chauſſier, profeſſor in the ſchool of medicine at Paris, on the means of preſerving the dead bodies of animals from putrefaction, and preſerving their eſſential form, and even of giving them freſhneſs and the appearance of life."

"After ſome primary conſiderations, which ſerve as a baſis to his reſearches, Cit. Chauſſier examines the different proceſſes which have been ſucceſſively employed, for the preſervation of entire carcaſes, or of anatomical pieces; and after having remarked that ſome are illuſory, and that the others do not protect animal ſubſtances from the voracity of inſects; that all are attended with the inconvenience of altering the eſſential configuration, and of reducing the body to a ſhapeleſs

maſs, he announces the ſolution of ſur-oxygenated muriat of mercury, in diſtilled water, as the moſt likely method to accompliſh the deſirable object. The uſe of this ſaline ſolution on animal ſubſtances, muſt vary according to the ſize and the condition of the object which it is intended to preſerve. If it be only a ſeparate piece, like the moſt of anatomical preparations, it is ſufficient to plunge it in a ſolution of ſur-oxygenated muriat of mercury, and to add in the vaſe one or more knotted parcels of fine linen, which contain ſome grammes of this mercurial ſalt, a precaution eſſential to the enſuring its remaining always equally ſaturated. After ten, twenty, or thirty days of immerſion, that is to ſay, when the part has been penetrated through its whole extent by the ſaline ſolution, when a new combination has been operated through all its points, we may draw it out of the liquor and place it in a narrow-necked jar or bottle filled with diſtilled water, lightly charged with ſur-oxygenated muriat of mercury, or elſe it may be expoſed in a well-aired place, ſheltered from the ſun and from duſt; it will then get dry, by little and little, acquire a conſiſtence and a hardneſs reſembling wood; and in this ſtate, ſays the profeſſor, it can no longer be either altered by the air, or attacked by inſects. This, indeed, has been ſufficiently proved by his experiments; Cit. Chauſſier having for many years abandoned pieces thus prepared, to inſects and to the viciſſitudes of the atmoſphere.

"The preſervation of the entire body requires particular care and attention, all the details of which it would be impoſſible to compriſe in a ſimple notice. It is in ſome meaſure a new art, the proceſs of which can only be well executed by an experienced anatomiſt. It may be remarked, however, that to ſucceed completely in this preparation, there ſhould be, by preliminary inciſions, performed according to art, certain foramina or apertures made, by which the ſaline ſolution may penetrate eaſily and readily through the texture of all the parts; and when it is intended to give freſhneſs and the appearance of life to the cadaver, it will be requiſite, previouſly, to fill the veſſels and cellular tiſſues with a ſolution of co-

loured gelatine or jelly. There should be, likewise, placed in the ocular orbits, eyes of enamel, proportioned to the age and habitual condition of the subject. After these preparatory processes, the cadaver should be plunged in the saline solution of sur-oxygenated muriat of mercury, and be kept there longer or shorter, according to its bulk or magnitude; after which it should be taken out to let it dry slowly, and thus form a sort of mummy as durable as those of Egypt, and which has, moreover, the advantage of preserving the characters and essential traits of physiognomy."* *Med. & Phys. Jour.*

Smith's Experiments on Wounds of the Intestines.

HAVING at page 107 of the 1st vol. of the Medical Museum, given copious extracts from that part of Mr. Astley Cooper's celebrated work on hernia, which treats of wounds of the intestines; with a comparison of the difference in the facility with which longitudinal and transverse wounds unite, and which by the experiments there detailed, were eminently favourable to

* In the month of September last, I took from a body, a diseased portion, and exposed it in an open vessel with some spirits. In a few days it began to grow very offensive; I therefore threw away the spirits and supplied the place with a solution of corrosive sublimate, about ℥i. or ℥ss. to nearly ℔i. of water. In this, the preparation continued for seven or eight months exposed to the air, and was then perfectly free from any putrid taint. In the early part of this year I opened a body in which the intestines were in the highest state of inflammation, and in many places sphacelated, so as scarcely to bear the slightest touch without breaking. The smell was so penetrating and offensive, that it was above a week before it left my coat. I brought away some portions of the intestines, and put them into a weak solution of the corrosive sublimate in water, which effectually destroyed the smell in a few minutes, and has added greatly to the firmness of the preparation. To these facts I may add, that having some years ago injected and dissected, several snails which I preserved in diluted alkohol, I was obliged occasionally to pour it off, to separate it from the fatty matter which gradually deposited from the preparations, and gave it a turbid appearance. As an experiment, I put these snails into a weak solution of corrosive sublimate, which preserves them effectually, and has given them a firmness they before wanted, without any injury to the colours of the injection, and it has checked the further deposition of the above-mentioned fatty matter. *Editor.*

the transverse,—it may not be improper to quote the following interesting experiments on this subject, from the Inaugural Essay of Dr. Thomas Smith, of St. Croix, one of the medical graduates in the University of Pennsylvania, for the present year—which Essay, he informs us, owes its rise to Mr. Cooper's invaluable work. As these experiments are not altogether so unfavourable to the union of longitudinal wounds of the intestines as those of Mr. Cooper, we may consider the point as yet *sub judice*, and expect a succession of experiments may place the fact exactly as it ought to stand.

"*April* 7."

"*Experiment I.*—Assisted by my friend Mr. Klapp, an incision was made into the abdomen of a dog; and one of the small intestines having been brought into view, a transverse section was made into it, and the wound secured by four stitches, one at the mesentery, and the other three at equal distances from each other: the threads were then cut off at the knots, and the external wound closed by the interrupted suture.* The animal did not appear to have suffered materially from the operation, for in twenty-four hours he took food, and after the first day exhibited no symptoms of indisposition. On the 30th, he was killed, the wound of the intestine was found completely healed; the place at which the intestine had been divided, appeared somewhat thickened, considerable adhesions were observed among the small intestines. Three of the ligatures had disappeared, the other was still remaining loosely attached to the internal coat, and probably would have been discharged in the same manner as the others, had the dog been permitted to live a few days longer."

"*Experiment II.*—On another dog, I repeated the same operation, with this difference, that the ligatures which had been cut off in the preceding experiment at the intestine, were now left out at the external wound, in case it should be necessary to withdraw them. In consequence of the restlessness of the animal during the operation, considerable violence was done to

* The interrupted suture was used in every instance for securing the external wound, unless particularly mentioned.

the parts, before they could be reduced. On the ſecond day after the operation, the dog appeared ſo ill as to make his recovery doubtful: on the 4th day, it was thought proper to remove the ligatures; after this he appeared better and took nouriſhment. On the 19th, he was killed: upon laying open the abdomen, the effects of inflammation were ſtill obvious. The omentum was found adhering to the parietes of the abdomen, and very much indurated. Preternatural adheſions had taken place among all the viſcera, but more particularly in the ſmall inteſtines, which were knotted and twiſted together in an aſtoniſhing manner. The inteſtine at the place where the wound had been made was not quite united."

"*April 9.*"

"*Experiment III.*---Several of my friends honoured me with their attendance, whilſt the following experiments were performed; the abdomen of a dog having been opened, and the ſmall inteſtines brought into view, a longitudinal inciſion of about an inch and a half was made parallel with the meſentery, which was ſecured by four ſtitches, and the intermediate ſpaces ſewn with a fine thread to prevent the fæces from eſcaping into the cavity of the abdomen:* the threads were cut off at the inteſtine. The animal died in about thirty-ſix hours. On diſſection the marks of inflammation were found much leſs than might have been expected.

"The wound in the inteſtine was completely torn open, excepting at one ſtitch."

"*Experiment IV.*---A full-grown dog was ſubmitted to the ſame experiment as the former, with this difference, that the intermediate ſpaces between each ſtitch were left unſewn. Six hours after the operation, the animal vomited ſtercoraceous matter, appeared dull and drowſy. On the 10th, in conſequence of food being offered, of which he took a ſmall quantity, vomiting was again excited. On the 12th, he took food, and from that time appeared to be doing well. Seven days

* According to the propoſal of Thompſon of Edinburgh.

after he was killed; on opening the abdomen the omentum was found adhering to the ſite of the external wound, being conſiderably indurated. The meſenteric glands were enlarged. The wound in the inteſtine was not completely united; two of the ligatures had diſappeared. The other two ſtill remained; the wounded gut had adhered to the meſentery and adjoining portion of inteſtine."

"*April* 10."

"*Experiment V.*---On a full-grown tarrier, I repeated the former experiment, wiſhing to ſee, whether a longitudinal inciſion could not by great care and attention, be ſo managed, as to do away the opinion of its being univerſally fatal. To effect which, a very ſmall opening was made through the parietes of the abdomen, and a portion of inteſtine being brought into view, it was divided longitudinally for about two inches, and afterwards ſecured by ſix ſtitches which were cut off at the knots. The parts having been returned, the lips of the external wound were brought together and ſecured by adheſive plaiſter.* The animal did not appear to have ſuffered in the leaſt from the operation, for in leſs than twenty-four hours he took food, and has continued doing well ever ſince."

"*April* 16."

"*Experiment VI.*---Pleaſed with my ſucceſs in the preceding experiment, I obtained another dog and opened his abdomen. In one of the ſmall inteſtines, I made a longitudinal wound for about three inches, and treated it in every reſpect ſimilar to that related above. This animal appeared to have ſuffered very little more than the other, conſidering the extent of the wound, for in about twenty-eight hours he eat, and continued doing ſo until the tenth day after the operation, when he refuſed nouriſhment. Two days after he died; on examination, it was found that the wound had healed completely, but directly above the wound a bone half an inch long, and

* For it was obſerved, that the ligature uſed for ſecuring the external wound increaſed the inflammation very much.

nearly as broad, was discovered to have perforated the intestine."*

"*Experiment VII.*---Wishing to know how much of the intestine might be removed, without much endangering the life of the animal, I performed the following experiment: having obtained a full-grown dog, an incision was made into the cavity of the abdomen, and two inches of one of the small intestines were removed; the divided portions were then brought together, and the wound was treated as the transverse incisions had been. In dissecting off the divided portion of intestine, some of the branches of the mesenteric arteries were wounded, but did not bleed during the operation. On visiting him in the afternoon, I found there had been a considerable hemorrhage which still continued. I did not open the wound, but applied a piece of wetted linen to the parts, which had the desired effect. On the 18th, the belly being somewhat tense, two of the external ligatures were cut away, that the blood, should any have collected, might be discharged; but the wound did not open, and the dog soon resumed the appearance of perfect health, which continued without interruption until May 6, when he was killed. The divided portions of intestine were found united, and the ligatures had been all discharged."†

"*Experiment VIII.*---Having opened the abdomen of a pointer pup, three inches of intestine were excised; the arteries being secured, the intestine in other respects, was treated as the last had been. In twenty minutes after the operation, he vomited the food which he had taken in the morning, and appeared dull the remaining part of the day. Three days after the operation, he took food, and continued doing well. May 6th, he was killed, and the abdomen being opened, it was with difficulty I could ascertain where the division had been; the coats of the intestine appeared somewhat thickened; one of the ligatures remained attached internally.

* This must have been owing to a diminution of the intestinal canal which is always produced by longitudinal wounds of the intestines.

† The viscera in this experiment appeared much more natural than in any other, probably from the hemorrhage that took place, which shews the propriety of bleeding largely in such cases.

" *April* 18."

" *Experiment IX.*—Having divided the inteſtine of a dog tranſverſely, I attempted to treat it in the manner ſpoken of by Mr. Ramdohr, viz. by introducing the upper extremity of the divided inteſtine within the lower; after having procured a piece of candle, as directed by him, it was inſerted into that portion of inteſtine, which was ſuppoſed to be the uppermoſt. I then endeavoured to introduce the ſuperior within the inferior, but the extremities of each became ſo inverted, that it was found utterly impoſſible to ſucceed; it was therefore given up and treated in the way recommended by Mr. John Bell, uſing only one ſtitch, and faſtening it to the parietes of the abdomen. The dog took food the day after. On the 20th, it was obſerved that the fæces were diſcharging at the external wound, when the animal appeared very weak, but ſtill continued to take food. On the 21ſt, he was much worſe, and the abdomen being tenſe, the ligatures at the external wound were removed to facilitate the diſcharge of the fæces, which gave a temporary relief. On the 22d he died. On examination there was found a conſiderable quantity of fæces and water in the abdominal cavity. One portion of the inteſtine had united to the external wound through which part of the fæces were diſcharged."

" *April* 28."

" *Experiment X, and XI.*—Wiſhing to give Mr. John Bell's method of ſtitching an inteſtine a fair trial, I made the following experiments: having obtained two full-grown dogs, a tranſverſe inciſion was made into the inteſtines of each of them, which was ſecured by one ſtitch and faſtened to the wound. No. 10, died in about twenty-four hours. The marks of inflammation were very great, and the fæces had been diſcharged into the abdomen. No. 11, died on the 2d of May. The inteſtines appeared very much inflamed, fæces as in the other inſtances were found in the abdomen, alſo water which the animal had drank. The large inteſtines appeared gangrenous, and tore very eaſily."

" *Experiment XII.*—A pointer put of about two months old was ſubmitted to the following experiment: a triangular piece was cut out of one of the ſmall inteſtines, and the wounded inteſtine ſewn to the parietes of the abdomen. The animal very ſoon ſhewed ſymptoms of indiſpoſition and died in thirty hours. On examination the peritonæum and all the viſcera of the abdomen were found conſiderably inflamed, a quantity of water was alſo in the cavity.

" It appears then from the reſult of my experiments on dogs, that not only the inteſtine may be returned into the cavity of the abdomen, but that the ligatures may be cut off and returned with the inteſtine,* and that we need not be under any apprehenſion of their being diſcharged into the cavity, for by ſome proceſs of the animal economy of which we are ignorant, the ligatures have in every inſtance either been diſcharged with the fæces or been found looſely attached to the internal coat of the inteſtine. It has been ſaid by Meſſrs. Cooper and Thompſon, that there is a curious difference in the facility with which a longitudinal and tranſverſe wound of the inteſtine unites. But in all the experiments which I have made, it was found that with care the longitudinal united as kindly as the tranſverſe, only requiring a little more attention to the diet of the animal, which ſhould be very ſparing and liquid until the wound has had time to heal. It certainly requires more pains to cloſe a longitudinal wound of the inteſtine completely, than one which is tranſverſe. The longitudinal inciſion always occaſions a diminution in the diameter of the inteſtinal canal, thereby producing dangerous obſtructions. If it ſhould be of any conſiderable extent, probably the ſurgeon would be juſtified in cutting out the wounded portion and treating it as a tranſverſe diviſion. This may be done without much endangering the life of the animal, as appears by two experiments where three inches of the inteſtines were removed."

* As was obſerved by Mr. Thompſon of Edinburgh.

Marine Spencer.

Deſcription of the *Marine Spencer*, for the preſervation of lives in caſes of ſhipwreck or other accidents at ſea, invented by Mr. Knight Spencer, of Broad-ſtreet, Cheapſide, for which the Royal Humane Society awarded him their honorary ſilver medallion. "This Spencer conſiſts of a girdle to fit the body, ſix inches broad, compoſed of about eight hundred old tavern corks ſtrung upon a ſtrong wire, well laſhed together with lay-cord, covered with canvaſs, and painted in oil, ſo as to make it water proof; when it is wanted, it is to be ſlided from the feet cloſe up under the arms, and to be faſtened over each ſhoulder by means of tapes or cords. A perſon thus equipped may ſafely truſt himſelf to the waves, for he will float head and ſhoulders above water in any ſtorm, and by paddling with his hands may eaſily gain the ſhore." *Month. Mag.*

Bone Broth.

Citizen Cadet de Vaux, ſuperintendant of the military hoſpital of Paris, &c. having long turned his thoughts to the enormous waſte that is made of bones, and on the means of ameliorating the ſubſiſtence of the indigent claſſes, the ſick, poor, &c. gives it as his opinion, that the only method to extract, with eaſe, the nutritive ſubſtance from bones, is to pulveriſe them. The author has made his experiments and obſervations the ſubject of a memoir which he has lately publiſhed. In this he acknowledges himſelf indebted to the dog for the idea of pulverization. He further obſerves, that one pound of bones will furniſh as much broth as ſix pounds of meat, and that the broth of bones, conſidered as an article of diet, is preferable to the broth of meat," &c. &c. Citizen Regnault has cauſed a peſtle and mortar to be founded at his foundery, for this particular purpoſe, and with a view to realize the object of theſe uſeful labours. *Ibid.*

Water-proof Cloth.

It is well known that for ſome years paſt ſeveral methods have been tried to render cloth impermeable to water, and the

inventors of this proceſs have kept the diſcovery a myſtery. There was, however, reaſon to ſuppoſe that ſome fat oil made the baſis of theſe recipes. A bottle of this liquor, the efficacy of which was known, having fallen by chance into the hands of Mr. Vauquelin, he was deſirous to diſcover the compoſition of it. The following is the manner in which this chemiſt thinks it is compoſed, bating the proportions. Soap and ſtrong glue, or any other gelatin, are diſſolved in water. With this ſolution is mixed a ſolution of alum, which, being decompoſed, forms in it a flaky precipitate, compoſed of oil, alumine, and animal matter. Weak ſulphuric acid is then added, to re-diſſolve a part of the alumine, and to render the precipitate lighter, and to prevent it from falling to the bottom. But the alumine, when once combined with the oil and animal matter, does not re-diſſolve entirely in the ſulphuric acid; for this reaſon, the oil always remains very opaque, and neither riſes nor is precipitated. It may readily be conceived, that two large a quantity of ſulphuric acid muſt not be added. Mr. Vauquelin does not know whether this be exactly the proceſs, but by following it, he has been able to obtain a ſimilar liquid, which poſſeſſes the ſame properties. *Tilloch.*

On the Precipitation of Metals.

It has long been known that the metals precipitate each other from acids in their metallic ſtate. Iron, for inſtance, may be employed to throw down copper, and copper to precipitate ſilver. But it has not been ſuſpected till lately, that the ſame precipitations may be obtained when the metals are diſſolved in alkalies; provided always, that the metals are employed whoſe oxyds are ſoluble in alkalies. *Klaproth* has lately publiſhed a ſet of curious experiments on this ſubject. Lead was precipitated in the metallic ſtate, by introducing a cylinder of zinc into a ſolution of oxyde of lead in pot-aſh. The ſame reſult was obtained when zinc was put into ſolutions of oxyds of tin and tellurium in the ſame alkali, and into

the ſolutions of oxyds of copper or tungſten in ammonia. This laſt reſult points out an eaſy method of reducing the very refractory metallic oxyds to the metallic ſtate.

Month. Mag.

Experiments on Nickel.

Mr. Richter is at preſent occupied in a ſeries of experiments upon nickel. In its pure ſtate this metal is very malleable, nearly as brilliant as ſilver, and more attractable by the load-ſtone than iron. It contains copper; but Mr. Richter has found a method of freeing it from this metal. The oxyds of the purified nickel are of a much more lively green colour than the ordinary oxyds, and their ſolution in ammonia is of a pale blue colour. *Month. Mag.*

Mode of preparing Brunſwick Green.

The beautiful pigment diſcovered by Kaſtelyn, called *Brunſwick Green*, much uſed on the continent for oil-painting and printed paper, is thus prepared: Shavings of copper are put into a cloſe veſſel, and ſprinkled with a ſolution of muriate of ammonia (crude ſal ammoniac). The copper appears to be firſt diſſolved by the acid, and then precipitated by the volatile alkali in this proceſs. The precipitate is waſhed and dried upon cloth or in wooden boxes. Three parts of the muriate of ammonia are ſufficient for two of copper.

Hiſtorical Mag.

Wilkinſon's Patent for making White Lead.

Inſtead of corroding blue lead, by vinegar, in pots, with the heat of dung or bark, Mr. W. takes litharge and grinds it exceedingly fine in ſea water, or in any other ſaline mixture; and then by repeated trituration, waſhing and bleaching, he obtains white lead of the beſt quality. The ſaline mixture is uſed to facilitate the proceſs, and the ceruſe may be procured by levigation, waſhings, and drying by the medium of the common air, more time being allowed for the operation.

Ibid.

Gum, for Calico-printing.

Mr. Stephen Wilkins, merchant, of Worceſter, thus deſcribes his invention of a gum for calico-printing.

To half a ton weight of ſcraps of pelts, or ſkins, or pieces of rabbit ſkins, or ſheep's trotters, add three hundred and fifty gallons of water, and boil them together for ſeven or eight hours, or until it becomes a ſtrong ſize. Then draw it off, and, when cold, weigh it. Warm it again, and to every hundred weight add four gallons of the ſtrongeſt ſweet wort that can be made from malt, or twenty pounds weight of ſugar, and when incorporated, take it off and put it into a caſk for uſe.

This ſubſtitute for gum may be uſed by calico-printers in mixing up nearly all kinds of colours. By uſing a ſixth part of gum with it, it will improve the gum, and be a ſaving of two hundred per cent; but without gum, of four hundred per cent. It will alſo improve and preſerve the paſte ſo much uſed by printers. *Ibid.*

Paſte to ſtop Holes in culinary Veſſels.

To ſix parts of yellow potter's clay is to be added one part of ſteel filings, and a ſufficient quantity of linſeed oil. This being mixed into a paſte of the conſiſtence of glazier's putty, the holes are to be filled with it, and after expoſure to heat it becomes quite hard. *Ibid.*

Prevention of the Weavil in Sea-bread.

The fatal effects of the weavil in ſea-bread have long been ſeverely felt by ſeamen employed on long voyages: rewards have been humanely offered by the legiſlature for a cure or preventative, but hitherto without ſucceſs. The following fact, diſcovered by accident, is ſtrongly recommended to the attention of thoſe who may be concerned.

A bag belonging to a powder-mill fell into a cauldron of liquid nitre; it was immediately taken out, plunged into cold water, and hung up to dry: ſeveral days after this circum-

ſtance the bag was filled with ſea-biſcuit, and ſent on board a Weſt-Indiaman, where it was ſtored away amongſt the captain's ſtock. The veſſel was nine months out of England before ſhe proceeded on her paſſage home, when ſhe got becalmed, and remained ſo long in that ſituation, that her crew were forced to be put on half allowance, more particularly ſo, as their bread was much deſtroyed by the weavils, and was hourly conſuming. The captain at this time wiſhing to make uſe of the bag above mentioned, which had not been opened ſince the ſhip left England, ordered it to be examined, when, greatly to his ſurpriſe, the whole contents were found to be perfectly ſound, without any appearance of having been injured by any; a circumſtance ſolely to be attributed to the quality of the bag. *Tilloch.*

Serum of Blood uſed for Painting.

In the Journal de Phyſique, of Ventoſe, an. 11, is an account of a new kind of painting with the ſerum or watery part of the blood, by T. Carbonel, M. D. of Barcelona. See alſo Tilloch, v. 15.

It is aſſerted that it is as eaſily applied as prepared; and that it unites in it all the advantages of painting in oil, without any of its inconveniences. Its application as a cement for ſtones of all dimenſions, eſpecially thoſe which are put into wood caiſſons for building under water, together with ſeveral other valuable properties, are pointed out.

Obſervations on the Plague.

As the work entitled "Obſervations on the Diſeaſe called the Plague, the Dyſentery, and the Ophthalmy of Egypt, and on the means of prevention, &c. &c. By P. Aſſalini, M. D. one of the chief ſurgeons of the conſular guard, &c. &c." is but little known in this country; and as it conveys the ſentiments of a man who was much experienced in thoſe diſeaſes; it may prove ſatisfactory to our readers to be acquainted with his opinion relative to the contagion of the plague—we therefore, have extracted the following from the work itſelf.

" *Whether this disease be really contagious?*

" Contagion has been distinguished by authors into volatile contagion and fixed contagion. The plague, which is certainly of all diseases the most severe and most fatal, has been supposed to arise from fixed contagion; and, according to the established principles of lazarettos, it has been judged sufficient to avoid immediate contact to escape the plague, and that hindering all communication will arrest its progress: without this precaution, they pretend that the disease is communicated, and propagates itself from one country to another.

" I have seen a great number of persons who have been attacked by the epidemic, after having had communication with others, who were already sick; and I would have adopted the conclusion, that it was to the contagion they ought to attribute their disease, if I had not also seen a much greater number who continued to enjoy good health, in spite of the most decided communication. I have even seen several individuals contract the disease, and die, although they had been living shut up, according to the manner of the Franks. I should have thought it right to conclude, that the disease of which we are now speaking was contagious, had I seen the Egyptians and Syrians fall under its influence as well as our soldiers, with whom they had constant intercourse. As soon as any one of our men was attacked, two Turks led or carried him to the hospital. There is no doubt that several of them shared the clothes of infected persons, without contracting the disease. If it had been contagious, as is pretended, it would not have been possible to have arrested its progress in Lower Egypt, nor to have hindered its spreading to Cairo. The lazaretto established near Boulac was at that time of very little use towards effecting so important an object. It is well known, that the fear of quarantine only caused the inhabitants to devise schemes to elude the vigilance of the guards of health, and custom house officers. Several Frenchmen and superior officers coming from Alexandria and Damietta by the Nile to Cairo, to avoid being detain-

ed for five days in quarantine, landed, with their horses, about a league from Boulac, and entered Cairo without performing it. How many pacquets and letters coming from Alexandria and Damietta, where the disease was raging, entered Cairo without producing any bad effect! What I have just said of the soldiers coming from Lower Egypt will apply to those who came from Syria, where the same disease had broken out.

"In the month of Floreal (April, May) three soldiers coming from Bekaire-Tel-Agy, a fort situated three leagues from Cairo, where this disease had shown itself, were conducted to the hospital of Ibrahim Bey: they died two days afterwards. These men had intercourse with more than sixty persons. The committee of health gave it as their opinion that they died of the plague, and ordered this hospital to be put under a strict quarantine; during the course of which not a symptom of the plague occurred, nor even a single death; although just before there had died more than two every fortnight.

"After the death of several medical officers at Jaffa, General Grézieu, commanding this province, recommended to the commissary of war, a native, who had the reputation of being an excellent physician for the plague: it was agreed that he should prescribe under the inspection of a French surgeon. This man opened the buboes indiscriminately, his knowledge in medicine not being extensive. For several years he had attended such inhabitants of Jaffa as were attacked by the plague, and he used no precaution whatever to preserve himself from this complaint, nor to avoid contact. I have seen him get up with his bare feet on the bed of General Grézieu, covered with sweat, and take him by the arms to change his posture, although he was then attacked with a carbuncle, of which he died an hour afterwards. When he had opened the buboes with his bistoury, he took a bit of lint, or a little charpee, to wipe it, after which he placed it between his forehead and his turban: he went in this way from one patient to another, not only in the hospital, but even throughout the city, and did not put it back into his case, until his visits were over. Citi-

zens Desgenette and Larray, the one physician, the other surgeon in chief to the army of the east, as well as several others of my colleagues, exposed themselves as much to the contagion without suffering any inconvenience. It would be tedious to mention here all the particulars. Citizen Larray, besides the operations practised in this disease, opened several of the dead bodies, and examined with great attention all the parts, but particularly the buboes, and the state of the lymphatic glands, all of which were in general found more or less enlarged. Citizen Desgenette pointed out to me two punctures, which he had made on himself, while in Syria, with a lancet dipt in the pus of a bubo: he made this inoculation, persuaded that the disease was not contagious, and both of these learned and zealous staff officers have continued to enjoy good health. The Commander in Chief Bonaparte, great in every emergency, braved, on several occasions, the dangers of the contagion. I have seen him in the hospitals at Jaffa, inspecting the wards, and talking familiarly with the soldiers attacked by the epidemic fever and buboes: a conduct which produced the best effect, not only on the spirits of the sick, but of the whole army. This heroic example encouraged at the same time the hospital attendants, whom the progress of the disease, and the fear of contagion, had alarmed considerably. I know that the advocates for contagion cite examples of persons and very large families who have died, because they had touched the sick, or the effects belonging to them, which, in their opinion, contained the germ of the disease: but they do not foresee, that it would result from this reasoning, that what they say of this disease, may be said of the ophthalmy of Egypt, the fevers of Mantua, and, in fine, of all epidemics."

His observations on the use of frictions with oil, may also be acceptable.

" It has been observed, that those people who manufacture or carry oil, are never attacked with the plague. Hence, it has been maintained, that frictions of tepid oil prevent or cure

this diſeaſe. The reſult of the obſervations made by Father Louis of Padua, director of the hoſpital for the plague at Smyrna, is the moſt favourable. He aſſerts, that during the twenty-ſeven years which he has been in this ſituation, he has ſeen no means employed againſt this diſeaſe more uſeful than frictions of oil; and to this day, in Smyrna, and ſeveral other lazarettos in the Levant, frictions of tepid oil are generally adopted as the beſt remedy. As ſoon as a patient, attacked with the plague, is received into the hoſpital at Smyrna, he is taken into a cloſe chamber, where they light a large pan of coals, in which they throw ſugar and juniper berries, or other perfumes; they then ſtrip off all his clothes, and rub his whole body with warm oil, until profuſe ſweats break out. The patient is then put into bed; and whenever the ſweating ceaſes, they repeat the frictions in the ſame manner, and ſo on ſucceſſively during ſeveral days, until the diſeaſe has ſpent its violence in conſequence of the ſweating. One pint of oil is ſufficient for each friction, taking care not to commence the ſecond before the ſweating occaſioned by the firſt has ceaſed. Thoſe who rub the patient take no other precaution than that of avoiding his breath; and in this way none of them have ever caught the diſeaſe.

"In the ſpace of five years, two hundred and fifty perſons infected with plague have been received into the hoſpital at Smyrna, and I am aſſured that all thoſe who were thus treated, have recovered, and that the number of perſons preſerved from the plague by frictions of oil is immenſe.

"In whatever way oily frictions act on the human body, one thing is certain, that in the mode practiſed at Smyrna, they are uſeful. In my opinion, the tepid oil ſoftens and relaxes the ſkin, opens and ſets free all the pores or extremities of the exhaling veſſels, whilſt it produces quite a contrary effect on the terminations of the lymphatic abſorbents, which it cloſes up and obſtructs.

"During the fever, the ſkin is commonly dry and ſhrivelled, the extremities of the exhaling veſſels, or pores of the ſkin, are cloſed, and preſent too great a reſiſtance to the more liquid part

of the blood, which is retained in the mass of fluids. This does not happen when the texture of the skin is relaxed, and the pores open. Besides, the oil contributes to cleanse the skin more than any other fluid, and absorbs, at the same time, a part of the caloric accumulated on the surface of the body; hence, perspiration and profuse sweats follow, which alone cure these diseases."

The sources of the malignant fever at Alexandria, Rosetta, and Damietta, are well pointed out by this gentleman in his work, as follows:—

"Alexandria is a city celebrated in ancient history, situated at 31° 13′ 5″ northern latitude, and at 27° 35′ of longitude from the meridian of Paris. It is washed by the sea on the west and the north, and on the east and south are situated the lakes Mareotis and Madiez. Rosetta is situated at 28° 8′ 30″ of longitude from the meridian of Paris, and at 31° 25′ 20″ of northern latitude. It lies about two leagues from the sea, upon the left bank of the Nile: to the eastward, on the other side of the Nile, there are a great number of flat grounds, which, after the inundation of the river, form very numerous and extensive marshes.

"Damietta, the third celebrated city on the coast of Egypt, on the eastern bank of the phatnitic branch of the Nile, lying in 29° 29′ 15″ of longitude from the meridian of Paris, and 31° 25′ 43″ of northern latitude, has the sea and the lake Menzaleh to the north, and is divided by the Nile. The fields of rice which surround this city contribute to infect the air; besides, there are several lakes, pools, and marshes in its environs, which render it very unhealthy. Senanieh, among others, is a village remarkable for its insalubrity.

"The heavy rains which fall during the winter at Damietta, at Rosetta, and Alexandria, contribute greatly to produce diseases, which the south winds, the fogs, and exhalations of the marshes render more dangerous. It is asserted that these diseases are more frequent when the inundations of the Nile are

high, and of long duration. The inundation of the year 6, (1798) was one of the moſt conſiderable; notwithſtanding which, the diſeaſe did not ſhow itſelf but in thoſe cities on the coaſt of the Mediterranean.

" The other cities of the Delta, Boulac, Cairo, Gizèh, and the whole of Upper Egypt, were preſerved from it. In the fort of Birket-El-Agi alone, a few deaths happened from a ſuſpicious diſeaſe, which, in my opinion, without having recourſe to contagion, were occaſioned by the evaporation of the ſtagnant waters of the *Lake of the Pilgrims*, ſo called on account of the meeting together, at this ſpot, of the grand caravan, which every year ſets off from Cairo for Mecca. The putrefaction of aquatic plants, and of the immenſe quantities of fiſh in this lake, contributed to its developement.

" In the ancient hiſtories of Egypt, there is no mention made of the plague. The former inhabitants of this celebrated country either did not diſtinguiſh this diſeaſe from others, or were unacquainted with it.

" It is certain that Alexandria, Roſetta, and Damietta, as well as the whole ſurface of Lower Egypt, are ſo much changed, that formerly theſe places might have been the moſt healthy parts of Africa. The ruins of entire cities, deſtroyed and overwhelmed; the majeſtic remains of ancient monuments, preſerved in ſpite of the overthrowing action of time, which at this day are in part ſubmerged and ſurrounded by water, are ſufficient to prove the revolutions which this part of the globe has undergone. The profound and intereſting reſearches made by General Andreoſſi, and by the reſpectable body of philoſophical men and members of the French Inſtitute in Egypt, are worthy of examination: they are preſerved in the Egyptian decade.

" At this day the lakes, the marſhes, and the filthineſs which one finds in the cities of Lower Egypt, are the principal cauſes of the frequent diſeaſes to which they are ſubject, and which can never be eradicated until we have found means to purify the atmoſphere of their environs. This important

advantage may be obtained by draining off the waters of the lakes, and filling them up; by keeping the cities clean, paving them, and giving a free exit to the rain water, which, ſtagnating in different parts of theſe cities, becomes corrupted, and, conjoined with filths, infects the atmoſphere. By ſimilar operations, ſeveral cities and provinces in Europe, America, and the Indies, have been rendered healthy. I have no doubt that the ſalubrity which we at this day enjoy in France and Italy, is the reſult of the amelioration of agriculture, and the perfection of the arts."

Extract from ſundry Reſolutions agreed upon at the original Vaccine Pock Inſtitution, London.

1. *Reſolved*, That it appears from the numerous reports that have been tranſmitted or atteſted by the members of the medical eſtabliſhment from abroad, from our own country, and from their own experience, that the proportion of failures in the cow-pock inoculation, to give ſecurity againſt the ſmall-pox, which have been publiſhed, does not amount to more than 50 out of 250,000 vaccinated perſons.

2. *Reſolved*, That it does not appear on examination of the publiſhed reports of theſe failures, and the inveſtigation of many of them by the medical eſtabliſhment of this inſtitution, that *ten* have been ſubſtantiated by admiſſible and adequate evidence.

3. *Reſolved*, That it ſeems more than probable, that all or many of even the admitted of failure according to the evidence produced, are liable to be deceptions, on the ſame grounds as in the aſſerted caſes of the occurrences of the ſmall-pox, ſubſequent to the ſmall-pox.

4. *Reſolved*, That, conſidering that the cow-pock inoculation has been the practice of producing an affection which practitioners in the firſt inſtances in general had not previouſly ſeen, and the hiſtory of which was ſo little known, and conſidering

the greater deceptions than in the ſmall-pox inoculation to which practitioners are expoſed, it was to have been expected that a much greater proportion of ſuppoſed failures would have occurred.

5. *Reſolved*, That it does not appear that a ſingle inſtance has occurred of the ſmall-pox, ſubſequent to the cow-pock, during more than five years practice at this inſtitution; for, on enquiry, two inſtances which were ſaid to be ſuch were found to be inadmiſſible caſes, viz. one of them on account of the ſuppoſed cow-pock preceding, being only a local affection; and in the other, that it was only proved that there was a local affection from the variolous inoculation.

6. *Reſolved*, That the numerous inſtances of expoſure of vaccinated perſons to the ſmall-pox ſince the commencement of the practice in January in 1799, and likewiſe of repeated re-inoculation with ſmall-pox matter at this inſtitution, and which have been communicated, eſtabliſh the fact, that a perſon who has really gone through the cow-pock is incapable of the ſmall-pox, on as firm ground as the fact of variolous inoculation giving ſecurity againſt the ſmall-pox.

7. *Reſolved*, That conſidering the novelty of the practice of vaccine inoculation, and that it has not been performed in many inſtances, after ſuch a mode as might give the greateſt chance of ſecurity; it is adviſable to take precautionary meaſures with many who have been inoculated, or who ſhall undergo the practice in future.

8. *Reſolved*, That the teſts of patients who have been inoculated being ſecure, are, expoſure to effluvia and contact with perſons in the ſmall-pox; inoculation with ſmall-pox matter, and re-inoculation with vaccine matter. But, for reaſons ſet forth in a memoir read at the quarterly meeting by Dr. Pearſon, the repetition of re-inoculation with vaccine matter is a preferable teſt; for, it does not appear, from abundant evidence brought forward by the experience of Dr. Pearſon, that a perſon who has gone through the cow-pock is ſuſceptible of it a ſecond time.

9. *Resolved*, That such practitioners as are desirous of seeing proofs of the proposition last stated, that a second inoculation for the cow-pock is an equally decisive test of the question of the susceptibility of a vaccinated person to take the small-pox as inoculation with variolous matter, be invited to attend at the institution, for that purpose.

10. *Resolved*, That although it is probable, from the amount of the deaths by the small-pox in the bills of mortality in two preceding years, viz. in 1803, of 1202; and in 1804, of 622, that the proportion of deaths by that disease has been diminished by vaccine inoculation; yet it does not appear justifiable to draw this conclusion positively at present—because, in former years, previously to the new practice, even a still smaller proportion occurred by small-pox, viz. in 1795, there were 1040; in 1797, there were only 522; and in 1799 there were 1111: therefore that it will require at least five successive years of vaccine practice to draw a just inference.

11. *Resolved*, That Dr. Pearson be requested to allow the memoir on the state of the practice of vaccination, and on the conduct of it, to be printed, in order to quiet the minds of many families disturbed by the late unfavourable reports.*

12. *Resolved*, That the medical establishment continue their practice of registering their observations, as the most likely means to reduce to certainty the vaccine practice as a prophylactic of the small-pox.

Phifeldeck, on the preparation of Corrosive Sublimate.

It is well known how much apothecaries, desirous of preparing their own medicines, are indebted to Mr. Westrumb, for having furnished them with a method of preparing corrosive sublimate without being exposed to the dangerous vapour it emits during the sublimation. For some time past I have employed myself, merely from scientific views, in preparing corrosive sublimate according to this method. But however much

* This will appear in our next number.

I may be ſenſible of the advantages of this proceſs, I cannot help regretting the loſs ſuſtained in the nitric and muriatic acids, which in general coſt ſo much trouble and expenſe before they can be obtained pure. I reflected a long time on the means of avoiding this loſs, and at length diſcovered a proceſs much more economical than that of the chemiſt Hameln. The queſtion was, to diſſolve the mercury in the cheapeſt concentrated acid (this acid, without doubt, was the ſulphuric acid), and to preſent to the oxyd of mercury the muriatic acid without having ſeparated it from its alkaline baſe. I reſolved then to prepare a ſolution of mercury in ſulphuric acid, and to decompoſe the ſulphate of mercury by muriate of ſoda. I then hoped that I could eaſily ſeparate the two ſalts that were formed by cryſtallization, as the ſulphate of ſoda for its ſolution took only eight parts of cold water, whereas corroſive ſublimate takes 162; but I found that after the firſt cryſtallization the two ſalts mixed, and that no other means of ſeparating them remained but by alcohol. I ſhall paſs over in ſilence, the operations which were attended with more or leſs ſucceſs in this point of view, and deſcribe only the proceſs which I definitively adopted.

I introduced into a tubulated retort two ounces of mercury and three ounces three groſs of concentrated ſulphuric acid; I then adapted to the retort a receiver, without luting it, and made a pretty ſtrong fire. During the ſolution there was diſengaged a very conſiderable quantity of ſulphureous gas. When nothing remained in the retort but a white maſs, I added a ſolution of five ounces and a half of marine ſalt in ſix ounces of water, and expoſed the mixture to ſtrong ebullition for half an hour. A complete ſolution took place. I filtered the liquid while it was in a ſtate of ebullition, put it into a retort, and diſtilled it to dryneſs. On the remaining maſs I poured ſixteen ounces of alcohol, and cauſed it to digeſt for ſome hours. I then decanted the liquid from off the reſiduum, filtrated it again warm, and put it once more into the retort after I had waſhed it, taking care not to ſpread any of it in the neck of the retort, and diſtilled it to dryneſs. I muſt here

remark, that the distilled liquid, which at first had the colour of Malaga wine, assumed, after the solution was concentrated, the colour of water de Rabel; and the saline mass, after the complete evaporation of the alcohol, was exceedingly white. Lime water made no change in the colour of this liquid.

I poured over the mass in the retort twelve ounces of water; I boiled it to solution, and, having filtered the liquor, exposed it to crystallize. Very beautiful crystals in the form of elongated prisms were deposited. I then poured over the residuum eight ounces of new spirit of wine, and again obtained a considerable quantity of corrosive sublimate. The distilled liquid, after being rectified on half an ounce of potash, was perfectly pure.

By employing this method, corrosive sublimate, in my opinion, will cost one-half less than by Westrumb's process. Sulphuric acid costs only one-third of what the nitric acid does; and there is no comparison between the price of pure muriatic acid and that of marine salt. I therefore flatter myself that this method will meet with a favourable reception.

Med. & Phys. Jour.

Helm, on the Digestive Power of the Human Stomach.

The author having the care of a woman, 58 years of age, who suffered under a remarkable disease of the stomach, took the opportunity of making several observations on the action of the stomach on different aliments. The subject of his observations had always enjoyed a good state of health, till she was married in her thirty-third year of age, when she was frequently attacked with cholics, vomitings, a redness, a burning and pungent sensation in the region of the stomach, which symptoms generally returned every third week, but were less violent in time of pregnancy. A blister, applied on the painful place, relieved her greatly, and during the space of one year, she found herself free from pain. After this time, she became pregnant, and about the middle of this state, she ob-

ſerved a tumour in the region of the ſtomach, of the ſize of a walnut, which had the ſame colour as the ſkin, and was painful. After the delivery, thoſe ſymptoms recurred with greater violence, and were almoſt inſupportable in rainy weather. Appetite good. The tumour began gradually to increaſe and to become hard till it reached down to the navel, and an anaſarca ſupervened. Thus it remained till the next year, when the tumour being accidentally preſſed, broke open, and about a pound of yellow purulent matter iſſued, when her ſufferings diminiſhed, together with the anaſarca. The opening was of the ſize of a ſmall pea, and ſmall particles of aliments came forth from it. Mr. H. being ſent for about this time, found the patient weak and emaciated; the opening gradually increaſed, ſo as to let a finger paſs into the ſtomach; a prolapſus of the oppoſite ſide of the ſtomach ſupervened, and a catheter could be introduced as far as the pylorus, without either much incommoding the patient, or cauſing vomition. In this ſtate, the patient remained five years, and during this time the author made the following obſervations. The food of the patient was extremely ſimple, wine cauſing much pain. Some hours after her meal, ſhe had violent pains in the back, reaching thence to the left ſide, and particularly a burning ſenſation about the edges of the opening, and ſhe was generally obliged to looſen the bandage, and to let the contents of the ſtomach iſſue, while ſhe relieved the pain by drinking milk. When the weather was fine, ſhe had neither hunger nor thirſt, and ſometimes faſted for about thirty hours. The taking of ſour krout or pickled cucumbers, ſallad, and ſour cherries or apples, gave her the leaſt pain, but any flatulent food ſhe could not keep above an hour in her ſtomach. In bad weather, ſhe felt a great deal of pain, and the prolapſus increaſed. Any violent motion would immediately make a good deal of gall run into the ſtomach, from which it iſſued through the external opening. Milk coagulated inſtantly after it came into the ſtomach, either through the mouth or the opening, which however arrived a little later, when the ſtomach had been waſhed with

water; aſſes milk coagulated lateſt of all. The patient was never obliged to bring out any ſpittle, nor could ſhe be made to vomit by a mechanical irritation. Stools followed regularly every ſecond or third day; urine was yellowiſh and cloudy; pulſe 80—85 in a minute, and after the taking of ſpirits, it became 112—120 in a minute, and then the food iſſued with force out of the opening. A ſolution of one grain of emetic tartar being brought into the ſtomach with a ſyringe, cauſed much trouble, and a burning ſenſation, and the periſtaltic motion of the ſtomach could be clearly ſeen. The pains were relieved by milk; and after three hours, ſhe had four watery ſtools.

The reſults of other experiments with aliments and medicines are as follow: white bread of all ſorts was more eaſily digeſtible than brown or black bread. Peas and lentiles were more digeſtible than beans. Pears and pine-apples more than apples. Peaches, apricots, plumbs and figs were eaſily digeſtible. Cheſnuts, nuts, and ſweet almonds were almoſt indigeſtible, with and without the epidermis. Turnips and potatoes were very digeſtible. Sallad and different ſorts of cabbages, prepared with vinegar, were eaſily digeſtible. All ſorts of champignons were difficult to digeſt. Veal, lamb's fleſh, and pork were more eaſily digeſtible than beef, mutton, and fleſh of a wild boar; not ſo eaſily as from a hare or other veniſon. Chickens, pigeons, &c. were more eaſy to digeſt than geeſe or duck's fleſh. The inteſtines of animals were eaſy to digeſt; ham was eaſily digeſtible; all ſorts of fiſh were ſoon digeſted. Sixty grains of Peruvian bark had loſt, after having remained from ſix to ten hours in the ſtomach, ten grains; the extracts of bark, cicuta, aconitum, had loſt in the ſame time, twenty grains; gummi guaiacum, limatura martis, and antimonium crudum, from ten to twelve grains. Caſtoreum, wax, aſſafœtida, and ruſty iron filings remained inſoluble; ten grains of camphor, were within ſix to twenty-four hours, diminiſhed from four to ſix grains. Gum arabic was quite diſſolved; ſixty grains of g. ammoniac loſt often, in ten or twelve hours, from eighteen to twenty grains. The weight of magneſia uſ-

ta, was increaſed twenty grains in the ſame time, and ſhewed no more any effervescence with acids. Flores ſulphuris alone were inſoluble, but by the addition of a neutral ſalt they became a little ſoluble. *Ibid.*

On reſuſcitation from Death by Lightning.

So many deaths having lately occurred from lightning, without any apparent attempts to reſtore the unfortunate victims;* it will not appear unſeaſonable to extract the following from the annual Report of the Royal Humane Society, for 1804. We cannot omit to obſerve that we conſider attention to other cauſes of ſuſpended animation, as much the duty of the Humane Society of this place, as to the only ſource they appear to notice, that of drinking cold water. It is more than mere parade, that has rendered the parent ſociety in Great Britain, of ſuch importance; by whoſe philanthropic exertions, 2869 men, women and children, have been reſtored to life.—*E.*

" *Suffocation by noxious Vapours or Lightning.*

Throw cold water often and repeatedly upon the face, &c. at ſome diſtance, and with force, drying the body at intervals. If the body feels cold, apply warmth gradually; and then employ the uſual plan of the drowned.

Lightning.

" Perſons ſtruck dead by lightning have been often conſidered by many people as the immediate objects of Divine wrath; by others, more charitably inclined, as the peculiar favourites of heaven; while it has been concluded by both parties, that any attempt to reſtore them muſt not only be vain, but preſumptuous. The ſucceſs of the Royal Humane Society has corrected popular prejudice, and proved that perſons, provided no fatal laceration enſued, may be reſtored to life.

* One ſucceſsful attempt has been recorded within a few days, in ſome of the news papers.

ADDRESSED TO THE TREASURER.

Fakenham, April 19th.

" DEAR SIR,

On the 12th of April, a ſtorm of thunder and hail ſuddenly came on, ſucceeded by a moſt vivid flaſh of lightning. I was requeſted to viſit J. Mitchell, who was ſtruck dead with lightning; and had been an apparent corpſe half an hour; his eyes were much dilated; and the countenance exhibited a ghaſtly appearance.

Viſible marks of the electric fluid were on his knees, ancles, and feet. I commenced the plan recommended by your highly-valuable Humane Society, which, in three quarters of an hour, was productive of ſpaſms, and the return of animation. My patient took to his bed for ſome days; but, by ſtrict medical attention, he is now perfectly reſtored.

Mr. Iſaiah Gilbert to the Rev. Mr. Steele.

" On the night of the 25th of June, the houſe of Mr. W. Martin was ſtruck with lightning. Mrs. M. was affected in her right arm. She rolled herſelf off the bed, and diſcovered her huſband an apparent corpſe. The water was driven in at the door: upon putting her right-hand into the water, ſhe felt immediate relief. She dragged her huſband off the bed; and, after ſome time, ordered buckets of water to be poured on his head. Mr. Martin moved, and raiſed himſelf on his hands. In a quarter of an hour he ſtood upon his feet, and, in a wild manner, cried out, " What are you doing?" His wife informed him they had been ſtruck with lightning; he ſoon became compoſed, although in great pain; but, in a few days, life and health were perfectly reſtored.

India Arms, Blackwall, July 2, 1803.

Gratuitous Delivery of the Reſuſcitative Progreſs.

" During the thunder ſtorm, the lightning ſtruck Mrs. Colley dead to appearance. By a perſeverance of two hours in the Humane Society's proceſs, convulſions appeared, which terminated in a gradual return of life.

Eleven perſons, apparently ſtruck dead by lightning, providentially reſtored by the Humane Society. Theſe important facts prove, reſuſcitation is as practicable as in thoſe who are ſuffocated, ſtrangled, or drowned.

Fulminis afflatos interdum vivere telis
Vidimus et reſici——— VIRG."

After the above ſtrong proofs of the utility of the meaſures purſued, it is hoped ſome exertions will be made to reſcue a fellow-creature from otherwiſe certain death.—*E.*

Mr. James Humphreys has juſt announced his intention of printing "Practical Obſervations in Surgery, illuſtrated with caſes and plates. By William Hey, Eſq. F. R. S." &c. &c. a work, which from its eſtimation in Europe, we doubt not will prove highly acceptable to the medical profeſſion throughout the United States.

DEATHS.

Lately in England, William Buchan. M. D. well known by his treatise on "Domestic Medicine," a work than which few have had a more extensive circulation.

NOTICE TO MEDICAL STUDENTS.

THOMAS T. HEWSON, proposes next winter to open a room for Practical Anatomy. The time to be devoted to the class will be for teaching the arts of dissecting, injecting, and preserving the animal body: also, for demonstrating such subjects as may occur from dissection.

February 25th, 1805.

DRS. DEWEES and CHAPMAN will commence their annual course of lectures on the theory and practice of midwifery, early in November.

June 28th, 1805.

The lectures on the principles and practice of midwifery, and the diseases of women and children, by Drs. JAMES and CHURCH, will commence on the first week of November next.

Their pupils will have the privilege of attending parturient women in the lying-in-ward of the alms-house, as well as at their own houses.

July 21st, 1805.

☞ Our correspondents are particularly requested to give titles to their respective communications.

ERRATA.— p. 149, of vol. 1, 2d line from bottom, for *regular* read *irregular*.
Vol. 2d, p. 34, add "of Loudoun county," to the name, in the title of the communication.

MEDICAL MUSEUM.

VOL. II.....No. II.

Some Account of the Diſeaſes that occurred on board the Ship China, during a Voyage from Philadelphia to Batavia, until her return to the Delaware. Communicated to the Editor. By STUBBINS FFIRTH, M. D.

THE China of 1008 tons, ten guns, and eighteen men, left New Caſtle, June —— and after a ſhort detention by contrary winds at Bombay Hook, proceeded to ſea on the 28th of June, 1804. We had a paſſage of —— days to the line, and arrived at the Cape of Good Hope, September ——

During our run from the capes of Delaware to the line, ſome caſes of diarrhœa, a few of catarrh, three of chronic rheumatiſm, and ſome remittents occurred: the nearer we approached the line the more caſes of diſeaſe occurred, particularly amongſt a number of the Dutch paſſengers which we had on board. As the weather about the line was very wet, we had frequent *ſqualls*, heavy rain with calms, which kept our men buſy; and the ſudden viciſſitudes from wet to dry, one hour expoſed to torrents of rain, the next to the direct rays of a burning ſun, were very unfavourable to health, and produced ſeveral caſes of bilious remittents; many complained

of vertigo, others of cephalalgia: these diseases all soon yielded to moderate blood-letting, gentle purging, emetics, and sudorifics, with sometimes an epispastic to remove local disease or concentrate the morbid excitement; some accidents occurred, several were wounded, and two or three had fractured bones; they did very well, and in no instance acted as an exciting cause of *disease*. It would perhaps be a good practice in ships from the northern or cold countries, to have their men well purged with a quantity of salt water, as soon as they arrive in warm climates or approach the line; I believe it would frequently be a means of preventing the advances of disease, and would recommend it particularly to those who have no surgeon, for when men get sick at sea, when they can receive no medical aid, they are in a deplorable condition.

From the line to the Cape of Good Hope, we had no serious cases of disease; trifling wounds from accidents occurred, slight cases of disease, a few cephalalgias, three or four cases of febricula, one of dyspepsia, and two of hemorrhoids; but after we had been a very short time at the Cape, several cases of remittent fever occurred, owing to our men getting intoxicated on shore, and lying in that condition all night exposed in the streets of Cape Town, or on the ship's deck, but they yielded to depletion and the antiphlogistic mode of treatment. One case of mania occurred, which yielded to bleeding, blisters, cathartics, and a *salivation*, after continuing for several weeks. From the time these recovered until we arrived at Batavia, the ship continued very healthy, two or three cases of colic occurred, and we had one case of ulcer of the leg, which had been of long standing, I believe several years.

October 24th, 1804. We arrived at Batavia in good health, but before we had remained here long, disease invaded us and continued to increase during all the time of our stay, which was until the 9th of December, during which time however, we lost but one man, named Alexander Steel, of malignant fever, after an illness of ten days or thereabouts. The dis-

cases we experienced here, were fever and flux; the first put on various forms, in some cases continued, others remittent, in others it assumed the type of a tertian fever:—of dysentery we had the acute and chronic.

We left Batavia as I have before observed, December 9th, 1804, and went through the Java sea, so as to pass the streights of Balli: as the monsoon had set in with considerable force, our ship large and a *considerable number of our crew ill*, it would have been impossible for us to beat through the streights of Sunda, and had we attempted it, we should in all probability have lost great part of our men, and been obliged to desist at last. In coasting along Java and Madura, we had very light winds with frequent calms, during which the heat was so intense that it was scarcely to be borne, and in a number produced vertigo and cephalalgia. Owing to the frequent calms we did not make the entrance of the streights of Balli until the —— instant, during which time our men were sickening daily; and even after we had entered the streights and passed a considerable way into them by beating up, we were driven back again by the changing of the current; however, after considerable trouble, at the next change of the current, we entered again and anchored before Balambuan; here we remained a day and a half, took in some water, &c. and lost one man, John Coats, with dysentery. We set sail about noon with a pleasant breeze, and beat through the streights by daylight the next day; during which time all hands were kept constantly and laboriously employed, which acted as the exciting cause of disease, for the very next day we had —— taken ill, and it is remarkable that every one of the boat's crew who were on shore at Balambuan were taken down; so that the ship in a short time resembled a hospital, as we had one-half of our men ill, and two-thirds of them complaining, before we had been at sea very long. At one time during our run between the streights of Balli and the Cape of Good Hope, we had but eight well men in a watch, and they weak, as most of them had been sick; for as

fast as some got well others were taken down, and relapses were very frequent: the fever predominated most, but a number of cases of dysentery occurred with very malignant symptoms. So general had been the fever and flux, that when we made St. Helena, there were but eight persons in the China who had not been sick; however there were then only —— on the sick list; and we had lost —— by disease; —— of the dysentery, —— of the fever or effects thereof.

About this time the scurvy began to make its appearance; the fever had nearly subsided, many were very feeble, and some were confined to their beds with the effects of it; several chronic cases of the dysentery existed, and cases of the acute continued to occur. The scurvy attacked those who had been very ill previously, and who continued so much debilitated so as to be unable to take exercise; in such cases its advances were pretty rapid, and it did not appear to yield to acids or any of the antiscorbutic remedies that were exhibited. A rob made from the essence of spruce afforded an agreeable drink for them, but rarely that I could perceive, checked the disease much. The disease continued to increase during the remainder of the voyage, notwithstanding all the remedies that were exhibited, insomuch that when we arrived, near two-thirds of the crew were more or less affected; seven died thereof before we made land, and one in the lazaretto (ill of dropsy and scurvy combined) after he arrived. Perhaps this man would have recovered had he not been exposed so much after the ship struck, and after he was taken off the wreck, being crowded in a small pilot boat for several days without the conveniences or comforts of life. Quassia, bark, and wine, supported the strength, but nothing would cure it at sea, that we had it in our power to use.

Of the Dysentery.

The dyſentery commonly commenced with a degree of languor, ſometimes a rigor; loſs of appetite ſoon enſued, the patient had been coſtive for a day or two, or he had been afflicted with a diarrhœa which ſoon changed its nature, and the patient became much troubled with a diſpoſition to go to ſtool, without ability to paſs fæces, or with a diſcharge of mucus and ſlime ſtreaked with blood, attended with great ſtraining, pain in the abdomen and anus, which ſoon became excruciating. About this time the diſcharges of mucus, or mucus and blood, were ſuperſeded by pure blood; the pulſe which in the beginning was moderately active and frequent, but eaſily compreſſed, (reſembling what Dr. Ruſh has in his emphatic manner ſtyled the ſoap-bubble pulſe that occurs in drunkards), evincing a ſmall degree of ſthenic action, begins to ſink and ſoon becomes weak, feeble, quick, and tremulous; the ſkin which at firſt was hot and dry, loſes a part of its dryneſs, and on ſome parts of the body, eſpecially the neck and breaſts, a degree of moiſtneſs is apparent; but the feet begin to grow cold, and the hands are cold, with a cold ſweat on them; the patient is forced to go to ſtool every few minutes, which gives him exceſſive torture, a prolapſus ani taking place every time: he complains of being fainty, is very dry, and wiſhes to be continually drinking cold water, and if indulged in it will drink large quantities; a puking takes place which is very troubleſome to a patient, now almoſt exhauſted and ſinking rapidly under his diſeaſe; he moans continually, even when aſleep, which is generally ſhort, and interrupted by frequent ſtartings and troubleſome dreams, from which he awakes with but little relief of his ſymptoms; his abdomen is tenſe, hard, and painful to the touch. In the commencement of the diſeaſe, the head was ſometimes affected with pain, and the eyes were red and inflamed, a puking ſometimes uſhered in the diſeaſe, and acrid

bile was discharged in considerable quantity. A convulsion takes place, after which the patient appears in many cases insensible, with low delirium, and inability to retain his fæces; the blood runs from him as he lies, but so thin as not to coagulate, at first of a florid colour, now dark and grumous; he has subsultus tendinum and hiccup; his countenance changes, and small purple spots appear on various parts of his body; his eyes become glassy, his nails blue, his extremities cold; his pulse weak, scarcely to be felt and intermitting, soon ceases entirely; a convulsion ensues which carries off the patient; sometimes he survives it and gradually becomes weaker and weaker until life ceases; he appears to expire without a struggle, and like a person falling asleep. But the progress of the disease was not always thus regular, even when uninterrupted in its progress by medical treatment; for sometimes there was no puking, in some no prolapsus ani, and in others no convulsion; some had little fever, while more had an intensely hot skin; some had profuse perspiration from the beginning, with an open regular pulse, but in *very* few cases so strong as to admit of bleeding, which I think was always injurious in the disease at Batavia, as it tended to make the patient sink more rapidly. In some cases the disease assumed an intermittent form, and in many remitted. In a number of cases it ran its course in a very few days, in some only three, in others five, while in others it ran on a considerable time, assuming a chronic nature and producing obstinate, and frequently fatal ulcers of the intestines.

Cases occurred where the disease alternated with the intermittent fever, and with the remittent; sometimes the disease would be violent for a day or two, then cease, and an affection of the liver or spleen would ensue. The disease appeared to partake more of an intermittent after we had been coasting along the shores of Java for a week, and the men had been exposed considerably, and were fatigued with beating the ship through the streights of Balli.

Of the Treatment.

I generally began the cure by giving a ſtrong emetic, compoſed of the antimoniated tartrite of potaſh, combined with eight or ten grains of the mild muriate of mercury. This operated very ſmartly, during which, the patients were directed to drink very plentifully of rice water, barley water, thin oatmeal gruel or chicken water: they were enjoined to drink not leſs than one, and if poſſible two gallons, ſo as to clear the ſtomach and primæ viæ of their contents. After producing copious emeſis, and diſcharging bile very often, it turned downwards, and operated as a cathartic, diſcharging acrid and bilious fæces and ſcybala, by which the patient was conſiderably relieved. At bed-time I gave a draught compoſed of forty or fifty drops of laudanum, a drachm of antimonial wine and half a drachm of ſpt. nitri dulc. pro re nata: this gave eaſe and ſound ſleep through the night, and commonly produced a copious perſpiration, which was encouraged by wrapping the patients up in blankets, and giving warm diluent drinks; camomile tea was ſometimes given for this purpoſe and with advantage. If the tormina of the bowels had not ceaſed, I now adminiſtered a mild mucilaginous injection, and gave a moderate doſe of the oleum ricini: frequently I diſſolved ſix grains of tartar emetic in two pounds of barley water, and gave from an ounce to an ounce and a half every hour, at the ſame time giving barley or rice water for their conſtant drink. If the griping was gone or inconſiderable, I gave ſmall doſes of calomel, rhubarb, and opium, every two hours through the day, ordering the patients to drink chicken broth, and eat ſome panada, ſago or tapioca, and occaſionally to take an ounce of warm camomile tea: by this time the ſtate of the ſyſtem was ſuch, that I could ſafely and freely adminiſter columbo, either in ſubſtance or decoction. Theſe remedies were gradually increaſed according to the ſtate of the ſyſtem, and in ſome caſes

Of the Malignant Fever of Batavia.

The fever of the climate is in some circumstances like the *American yellow fever*, the symptoms in many instances are alike, it has a great tendency to intermit, and in a number of cases is a complete tertian; the symptoms however are various, and it is seldom seen exactly alike in any four persons, although its characteristic marks render it easily known and its frequently fatal termination evinces its extreme malignancy, as well as the little influence medical treatment has in some of the most violent cases; for there are cases which have so speedy a termination that medicine can do no good; dissolution appears to commence the instant the disease seizes the unfortunate patient, and all the powers of the system are so prostrated that it is impossible for reaction to take place, as the excitability is exhausted; and it is owing to this exhaustion thereof, in all the diseases of hot climates, that medicines can be given in such large doses, and that the diseases are so very difficult to cure, medicines in ordinary doses producing no effect. This may perhaps enable us to account for the very great diversity in the symptoms of disease in hot climates, for as the excitability is more or less exhausted, the re-action will be greater or less; and this will give origin to the various forms, appearance, and symptoms, evident in disease, which will also be influenced by the previous habits of the patient, the age, sex, and degree of exposure to the remote, predisposing, and exciting causes.

The disease *frequently* commences with ennui, languor, lassitude, listlessness, attended with a pain upon motion; this continues for a few hours, sometimes for a day or two, (in my own case two days,) before the other symptoms come on, then follows a rigor, (but the most malignant cases are without,) succeeded by a pain in the head, generally in the forehead; sometimes the head is free from pain while the limbs are violently affected, and there is great pain in the back: soon the patient

complains of pain in the epigaſtric, and ſometimes in the umbilical, region, attended with vomiting, and frequently a copious diſcharge of bile, but I have ſeen caſes where no bile was diſcharged. The pains ſoon become excruciating, the eyes red, ſometimes of a dingy hue, occaſionally uncommonly brilliant and ſparkling. The pulſe frequent, full, and ſoft or ſmall, quick, irregular and jirking, often intermitting and very eaſily compreſſed; *very rarely hard or tenſe*, and ſinking rapidly after bleeding; the ſkin, hot, dry, and ſmooth, the face ſwelled, the body occaſionally appeared puffed up as though the patient had tympanites: in a very few caſes ſpontaneous perſpiration enſued early in the diſeaſe, but this occurred more frequently after a few days continuance; the rigor that uſhered in the diſeaſe was ſucceeded by a fever, ſometimes attended with delirium, and generally continued for two days, when it ſubſided, an intermiſſion enſued, and the patient appeared free from diſeaſe but much debilitated; this intermiſſion continued for about twelve hours, more or leſs, when another paroxyſm enſued, attended by a chill; in this, delirium was much more frequent than in the firſt; it was never of the raging kind, but commonly low, as occurs in the typhus mitior: the ſecond paroxyſm continued for twelve or eighteen hours, when another intermiſſion took place, but left the patient very weak and feeble, unable to ſit up without fainting; the pulſe being *remarkably quick and weak, the eyes yellow*, the ſkin of the neck and face tinged of the ſame hue; the patient now perſpires copiouſly, his voice is low, his ſpeech ſlow, his intellects natural, a morbid irritability of the ſenſe of feeling frequently exiſts, the ſlighteſt touch cauſing pain. The nauſea is very diſtreſſing in the third paroxyſm, and ſufficiently troubleſome in the firſt and ſecond. He continues in this ſtate growing weaker and weaker until the third paroxyſm takes place, which frequently carries him off: ſometimes he ſurvives even the fourth—and caſes occurred where it degenerated into typhus, and continued for thirty, and in one caſe for forty-two days; but more frequently it becomes a complete tertian, occurring every other

day, and preceded by a violent chill, which frequently laſted for an hour. Caſes occurred where the patient was attacked with malignant ſymptoms; ſoon the diſeaſe aſſumed a tertian form, which after continuing for ſome time became remittent, and afterwards typhus.

I muſt here obſerve, that caſes occurred in which few or none of theſe ſymptoms were ſeen; ſome complained only of a little nauſea, appeared ſtupid and inclined to doze, but without pain: others were weak and feeble, had no uneaſineſs or pain, yet a wildneſs in the eyes was perceptible. In both theſe forms of diſeaſe the patients frequently walked about until a few hours before death, and even after the abſence of pulſe at the wriſt. Beſides the ſymptoms already mentioned, there were others that indicated greater or leſs danger to the patient; for inſtance, a ſwelling of the alæ naſi and upper lip was a ſign of recovery, ſo were boils breaking out in the face, neck, or any part of the body; they frequently occurred after bliſters, and on the parts to which they had been applied; in ſome they maturated perfectly, in others not. I obſerved that where they ſuppurated perfectly and kindly, the patients quickly recovered; but where they were a long time in coming to a head, the diſcharge was thin, ichorous and bloody, and the patient had a very tedious convaleſcence, and was very ſubject to relapſes. Some recovered who had no boils. Theſe ſometimes had an eruption on the ſkin like urticaria, and in ſome caſes ſimilar to the eſſera; in a very few like the pſora. Some had an eruption like the prickly-heat; others like the ſcarlatina. Thoſe who died had neither eruptions nor boils. A ſore throat was a frequent ſymptom, and generally favourable. A diarrhœa was frequent in the beginning of the diſeaſe, but ſometimes an obſtinate coſtiveneſs attended. I ſaw no great diſadvantage from a diarrhœa in the beginning, but when it came on near the criſis, it was extremely alarming and dangerous, as it carried off the patient very ſoon, and in ſome caſes baffled all medical efforts to ſtop its progreſs.

An intermitting pulse was in general a dangerous symptom; absence of pulse occurred in a seaman of the name of Beggs, for five hours; it then returned, and he survived for thirty-six hours after.

A delirium was a dangerous symptom. All those who died (one excepted) had it, but some recovered who were afflicted with it to a violent degree. A deafness occurred in some; it was a dangerous symptom, being generally fatal; *very few recovered* who had it.

A deficiency of vision was very common. Many complained that they could scarcely see, and some of the convalescents on walking a few steps, were taken with blindness, and vertigo, and fell down immediately. In all, the eyes were remarkably weak. The recoveries were very slow, and relapses frequent.

When the disease appeared in the intermittent form, it was less dangerous than when it assumed the continued or remittent type. When remittent, it generally degenerated into an intermittent; but some instances occurred where the intermittent became remittent; then continued, and lastly, typhus.

Some had an enlargement of the liver, and numbers had an enlargement of the spleen. In some, the enlargement of the spleen was very troublesome and painful; in others, it gave no pain, but occasioned a sense of weight, oppression and nausea; others scarcely experienced any inconvenience from it. In one case it suppurated, and occasioned sudden death by discharging internally. Whenever the liver or spleen became affected, it protracted the recovery of the patient, disposing to frequent relapses. A yellowness of the eyes was a common symptom, though not a very dangerous one. It occurred in the worst cases; however, I saw it in many who were not violently affected. Great debility was a dangerous occurrence: I think I never saw any disease which so soon debilitated men; the strongest and most robust were in a very few days rendered as helpless as children. The old, the infirm, and those who led irregular lives, suffered most by it; but

none were exempt from its influence: eight perſons only of the whole crew, (ſeventy-ſix in number,) eſcaped both the fever and the dyſentery. The fever appeared to alternate with the dyſentery; when the weather was bad the latter prevailed; when good, the former. In ſome caſes the fever would attack the dyſenteric patients; but more frequently, patients who were affected with the fever, would be ſeized with the dyſentery. Caſes occurred of perſons being ſeized with the fever, upon which the dyſentery would ſupervene; and after continuing a few days, ceaſe, and the primary diſeaſe again recur, thus alternating one with the other. Borborigmi was a ſymptom of convaleſcence. Great thirſt attended the fever, and was a dangerous ſymptom; nauſea was a very troubleſome ſymptom, and dangerous near the criſis. Hiccup was always *very unfavourable*, being one of the laſt ſymptoms that occurred before death.

The ſkin was in general intenſely hot, ſo that the hand could ſcarcely be kept five minutes on the bodies of the fever patients without experiencing pain; and I obſerved that the more ardent the fever, the greater was the danger of the patient. By the heat of the ſkin, &c. this diſeaſe anſwered to the true Cauſus of authors.

A diſagreeable, cadaverous odour, accompanied the diſeaſe, and the greater or leſs degree thereof indicated greater or leſs danger to the patient. The cuticle of the convaleſcent generally ſeparated from the cutis vera and came off; whenever, therefore, I ſaw the cuticle ſeparating, I had great hopes of my patient, and was enabled to prognoſticate a favourable termination, in which I was never diſappointed. A cold ſkin, with low muttering delirium was a dangerous ſymptom; coldneſs and torpidity of the extremities were always unfavourable. Involuntarily paſſing of the fæces and urine were very dangerous omens; the inability to paſs urine was likewiſe unfavourable. It was generally of a blood-red colour, though in ſome it appeared of a dirty brown colour,

and was discharged with pain: these generally were very bad cases. Some cases, where it deposited a dark lateritious sediment, terminated favourably. A tremor, picking at the bed-clothes, low muttering, or a loss of speech, were generally fatal symptoms.

Method of Cure.

The treatment was very different, as the disease varied its appearance or type, and as the symptoms, indicated. However, it frequently admitted of a little evacuation, and whenever the state of the system would permit, the antiphlogistic remedies were used; but in the greater part of the cases it was necessary to pursue the Brunonian practice, or tonic plan of cure, from *almost the commencement of the disease.*

I did not see a single case that would admit of bloodletting; but found in the beginning, if the fever was very high, the thirst great, and the eyes of a dingy red, that smart cathartics were of great service. I generally gave jalap and calomel, but in some cases used Glauber's salts, and gave cremor tartar and water for drink: I had the patient placed where he could have the benefit of a free circulation of air. Enemata were exhibited every two or three hours during the paroxysm, with advantage. Emetics were useful; they discharged the acrid and sometimes bilious contents of the duodenum and stomach. During the operation I gave large quantities of barley water, or weak camomile tea moderately warm. By these means the primæ viæ were cleared of their contents and a diaphoresis was induced. If the patient did not sweat freely, I now gave acetate of ammonia in small doses, frequently repeated, or a mixture composed of antimonial wine, laudanum, and spiritus nitri dulcis, pro re nata; which seldom failed of producing the desired effect. Sound sleep ensued, and a remission of the fever followed. Blisters were then prescribed, and applied to the extremities. If the head continued affected

I applied one to the back of the neck, or two behind the ears. If the patient complained of uneaſineſs in the ſtomach, one was placed on the epigaſtric region. They were ſuffered to remain on for a conſiderable length of time, after which they were taken off, and the parts dreſſed with very ſtrong mercurial ointment, with a few cantharides in it. In a number of caſes I ſprinkled calomel all over the veſicated part and applied an unguent compoſed of ſimple cerate and calomel. By theſe means I in *ſeveral* caſes produced a gentle ptyaliſm; all ſymptoms of diſeaſe vaniſhed, and the patient quickly recovered.

In ſeveral caſes where no diſpoſition to remiſſion appeared, bliſters were applied with the beſt effect in producing one. After a remiſſion had taken place, they were remarkably uſeful in removing local diſeaſe, concentrating the excitement to the ſurface; and thus relieving parts eſſential to life, from the effects of morbid action. I applied them on Mr. John Hunter's principle, and with the happieſt effects; for as no two actions of unequal force can exiſt at the ſame time in the ſyſtem; ſo bliſters, by tranſcending the morbid action, cured the diſeaſe; for which purpoſe I kept them open for ſome length of time, and wherever the patient complained of pain, applied one over, or as near the part as poſſible. After a remiſſion had taken place, they had great effects in preventing an acceſſion of the diſeaſe, and I always applied one or two at the time I expected the paroxyſm to commence.

Whenever the liver or ſpleen became affected, I found *great advantage* from a bliſter over the part, and kept open for ſeveral weeks. In fine, for this diſeaſe, in all its various ſymptoms, and Protean forms, bliſters are a *ſine qua non* in the treatment, and whoever expects ſucceſs muſt employ them.

As ſoon as a remiſſion took place I exhibited tonics and incitants. The Peruvian bark was the moſt powerful. I gave it in the commencement in ſmall doſes, frequently repeated. In ſome caſes I combined an aromatic with it, eſpecially where it lay heavy on the ſtomach. Many could take it when com-

bined with caſſia and nutmeg, that could not without; to thoſe who could not take it in ſubſtance, I gave the infuſion, decoction, and Huxham's tincture; the latter was very grateful to the ſtomach. The doſe was gradually increaſed as the ſtomach could bear it, or the indications of the ſyſtem required it. Where great debility exiſted I applied it in fine powder to the extremities, to the breaſt, and back of the neck. In one caſe where it could not be kept on the ſtomach, the patient derived great advantage from having it quilted between two pieces of muſlin, and tied round his body—at the ſame time that large plaſters of the extract were applied to his arms and legs. I found, in ſeveral caſes, a plaſter of the extract applied to the epigaſtric region, produce very pleaſing effects. A decoction of bark uſed as a bath was very advantageous. On account of the expenſe attending this method of uſing it, oak bark was ſubſtituted for the Peruvian, and appeared to anſwer nearly as well. When a patient's legs and feet were placed in a ſtrong decoction of oak bark, the effect produced was as great as if he had taken half an ounce of the cinchona. Caſes occurred in which I was neceſſitated to give two and three ounces of bark daily, or I ſhould have loſt my patient. I found the extract to anſwer better than the cortex, on account of its ſmaller bulk, in caſes that required ſuch powerful ſtimuli, as it was leſs liable to produce a ſenſe of oppreſſion on the ſtomach. When the diſeaſe aſſumed a typhus grade, or very great debility exiſted, I derived advantage from a * mixture compoſed of extract of bark,

* The following were the preſcriptions—

℞. Gum. tragac. ʒſs.
Extract. cort. Peruv. ʒijſs vel iij.
Vol. ſal. ammon. ʒij.
Gum. opii, grs. iv.
Aq. pur. ℥viii. m. ft. miſt.—ſigne, to take a table ſpoonful every hour or two.

℞. Extract. amar. ʒij.
Tinct. opii. ʒiij.
Gum. camphor. ʒij.
Pulv. gum. tragac. ʒiſs.
Aq. pur. ℥viij. miſce et ſt. miſtura—ſigne, to take a table ſpoonful every two hours—if very low, every hour.

ammoniac and opium, combined with gum tragacanth and water, and given every hour. In some cases I used camphor, myrrh and extract of bark, with advantage.

Columbo was used in substance and in tincture with advantage; quassia, gentian, camomile, seneka and serpentaria, were used and alternated with the bark. In some cases where bark failed they effected a cure; but more frequently the bark would cure where they failed. The system will frequently accommodate itself to the impression of certain articles, so that their good effects are lost by habit. If in such a case a weaker tonic is given, it will cure where a stronger has failed, because its impression is new.

In several cases that resisted the use of tonics, I found a salivation to succeed; and as the liver and spleen were so liable to become affected, I found it necessary in almost every case to modify my prescriptions, if possible, so as to prevent these secondary effects of the disease from occurring, by using mercury in small, but frequent doses, when I had reason to suspect the former, and using the preparations of iron liberally, when I expected the latter. I have already observed, that where the disease was remittent, and continued for some time, the liver generally became affected; but where it appeared in the form of an obstinate intermittent, an enlargement of the spleen ensued. In the former case I used calomel with the tonics; in the latter, the rubigo ferri, combined with cinnamon, was very useful. I cured several cases by the sulphate of zinc in small doses, frequently repeated. Sometimes I combined it with rubigo ferri, and am of opinion that the virtues of both were thereby improved. I derived considerable advantage from the *nitric acid* in these cases. I began with it in small doses largely diluted with water, and increased it gradually as the patient could bear, until I gave to the amount of two and three drachms per day. It produced a ptyalism in every case, but the fœtor attending it was different from that produced by mercury, and not nearly so disa-

greeable. I found it very uſeful when the liver or ſpleen were enlarged; in many caſes preferable to mercury, as it is a tonic and can be given in caſes of great debility, where mercury cannot. It is particularly well adapted to this diſeaſe, and I believe its uſe cannot be too ſtrenuouſly enforced. In ſeveral caſes it effected a cure by itſelf. Its effects ſeem as uſeful in the diſeaſes of the liver and ſpleen, as thoſe of mercury in the cure of ſyphilis. Dr. Scott of Bombay deſerves great credit for bringing it into practice. It is particularly adapted to cure the diſeaſes of warm climates.

I uſed the ſulphuric acid; it made a very pleaſant drink, but its effects were not ſo powerful as thoſe of the nitric acid; nevertheleſs it may be advantageouſly uſed, eſpecially while the febrile paroxyſm exiſts, as it quenches the thirſt and allays the fever at the ſame time that it proves incitant: but I would object to its being uſed in the firſt attack; here it would not anſwer ſo well; but after the diſeaſe has continued ſome days, it will be found very grateful to the patient. I never ſaw it affect the ſalivary glands as the nitric does.

I uſed the muriatic acid at firſt, but cannot recommend it. I was ſoon obliged to lay it aſide, on account of the great thirſt it produced; I alſo thought it increaſed the febrile heat.

The acetic acid mixed with ſugar and water formed a very pleaſant drink, which the patients were fond of uſing. Nothing was more advantageous during the progreſs of the diſeaſe than great attention to cleanlineſs and pure air. Without attention to theſe the diſeaſe will be much more difficult to cure. With this view I found it advantageous to have the ſeamen waſhed all over with warm water as ſoon as they were taken ſick. When the patient was convaleſcent, nouriſhing diet haſtened his recovery; Port wine and Madeira were very nouriſhing drinks; they were preſcribed in large quantities in the typhus ſtage of the diſeaſe. Porter did not appear to anſwer ſo well as wine: but two or three caſes occurred where the patients became tired of the wine, and uſed the porter with

advantage but these were considerably advanced in a state of convalescence.

Sago, tapioca, panada, &c. were grateful to the convalescents. Soup, fowls, &c. they were fond of, and used them with advantage.

Sinapisms were very useful in this disease. In the typhus state they should never be dispensed with, as by acting more powerfully than blisters, they concentrated the diffused excitement in a superficial part, thereby relieving the system from some of the most troublesome symptoms. When the patient became comatose, if applied to the arms, legs and feet, they seldom failed of relieving him. When applied to the back of the neck their effects were most powerful. They succeeded in several cases where blisters would not draw. Convinced of their powerful effects, I frequently applied them to the feet, and used them alternately with blisters, to various parts of the body. They have all the virtues of blisters, and being more powerful, are to be preferred in that excessive torpor of the system that occurs in this disease, which frequently prevents blisters producing any effect before a considerable lapse of time; whereas these act almost immediately.

A Case of long Continuance of Pulsation in the Funis Umbilicalis after the Birth of the Child. Communicated to the Editor by Dr. Wm. Dewees.

On the 12th May, 1794, at 8 o'clock A. M. a lady was delivered of a female child. The child did not cry or breathe as is usual immediately after delivery, but remained motionless for three or four minutes, before any signs of respiration manifested themselves. I was surprised at this unusual

delay, as neither the circumstances of the labour, nor the appearance of the child could account for it—the labour was quick and natural; the child though not very large was apparently healthy and well formed; the pulsations of the umbilical arteries brisk; in a word every thing was as ordinary except the want of respiration: to establish this, I inflated the child's lungs, after waiting the three or four minutes just mentioned, which in part succeeded as to its object; the child after this began to inspire slowly, the expiration was protracted and attended by a peculiar creaking kind of noise---respiration was for some time carried on in a slow and irregular manner---the child sometimes breathing pretty freely for a minute or two, and then appearing to be much oppressed and in pain---respiration would now be entirely suspended from ten to thirty seconds; the child during this time would writhe its little body as if much pained, its face would become livid, and the pulsation in the funis would be much augmented; after this kind of struggle would subside, it would appear pale and lifeless as though it had fainted. In this manner did things go on until half past two o'clock in the afternoon, a period of six hours and an half---at which time the umbilical arteries ceased to beat and the child expired; the cord during the whole of this period was of course suffered to remain entire: the pulsation in the cord did not cease suddenly, as the forces of the arteries were observed gradually to diminish some minutes before they ceased to beat.

During all this period of six hours and an half, nothing untoward happened to my patient, she had neither flooding nor pain.

The state of the placenta was from time to time examined ---it adhered to the inferior anterior part of the uterus---its lower edge could be felt above the pubis, and just within the mouth of the uterus.

There were no particular pains taken to prevent the funis being exposed to the air, or to maintain its warmth by any applications.

When I proceeded to deliver the placenta, I found it lying loose in the vagina, its extraction was effected without any difficulty, nor was it followed by any uncommon discharge of blood: but pains succeeded.

Upon the history of this case I beg leave to make a few remarks: first, there being no hemorrhagy in this case during the retention of the placenta proves, I think almost to demonstration, that it only happens from that part of the uterus to which the placenta is attached:—secondly, that the tonic* contraction of the uterus may for a long time be suspended without danger, if the placenta continues its connection with the uterus:—thirdly, that the uterus was in a state of torpor or in-elasticity for the whole, or the greater part of the time; for had its tonic action taken place, the placenta would have been thrown off, or at least the circulation in it would have been destroyed; as we find, even during some laborious labours, where both the tonic and spasmodic contractions,† after the evacuations of the waters, are powerful, that the blood passes with such difficulty through the uterus, that the circulation in the placenta is with difficulty maintained; and is in some instances, entirely destroyed, to the destruction of the child, long before its delivery:—fourthly, that nothing could have been more fortunate than this uncommon attachment of the placenta in the case before us; for had it been thrown off before the uterus had recovered from its state of torpor or in-elasticity (as is sometimes the case) a fatal hemorrhagy might have succeeded, for it is but by this tonic action that hemorrhagy is prevented always following the detachment of the placenta—it is on this power, that the practice of Puzos is founded, of rupturing the membranes in a certain species of flooding cases, that the uterus may contract, and shut

* By tonic action or contraction, we mean that constant and regular action whereby the uterus reduces itself to its original state after having been distended.

† By spasmodic contraction we mean, that irregular action of the uterus that is excited by stimuli, and is commonly labour, or after pains.

up the mouths of the bleeding vessels :—fifthly, her having no pains during the attachment of the placenta, shews that the spasmodic contraction is dependant on the tonic ; for were it not, we cannot conceive why it should not have taken place, since the placenta (a sufficient source of irritation) remained to stimulate the uterus for more than six hours ; and the pains which succeeded the delivery of the placenta, were, consequently, after the tonic contraction had taken place :—sixthly, there having been no particular pains taken to prevent the expolure of the funis to the air, nor any warm application to maintain its heat, shews that the death of children, in cases where the funis is prolapsed into the vagina, or is without the labia, is not owing to the influence of the air stopping the circulation in it (as some have imagined), but is in consequence of some pressure exerted on it at the margin of the pelvis or elsewhere, more especially as this must almost necessarily take place, in cases where prolapsus must readily happen, that is, in belly presentations :—seventhly, the gradual diminution that was observed, in the force of the umbilical arteries, for ten or fifteen minutes before they ceased to beat, marks, I conceive, the uterus recovering its tonic contraction ; for so soon as it began to pucker up, the circulating force, both in it and in the placenta, was diminished ; at length it contracted so much, as to entirely impede that of the placenta, and eventually throw it off. At what precise moment this happened I cannot determine, as about fifteen minutes were employed in exertions to save the child, and during which time, I did not touch ; but suppose it took place at the time the circulation in the funis stopped, or very quickly after, for as I have observed before, when I went to deliver the placenta, I found it loose in the vagina.

How much longer the child might have lived, had not its connection with the mother been destroyed, I cannot pretend to determine, but think it probable, it might have continued, as long as that circulation may have been maintained. It appeared to me to have been entirely dependant on the mother for the

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up the mouths of the bleeding vessels :—fifthly, her having no pains during the attachment of the placenta, shews that the spasmodic contraction is dependant on the tonic ; for were it not, we cannot conceive why it should not have taken place, since the placenta (a sufficient source of irritation) remained to stimulate the uterus for more than six hours ; and the pains which succeeded the delivery of the placenta, were, consequently, after the tonic contraction had taken place :—sixthly, there having been no particular pains taken to prevent the exposure of the funis to the air, nor any warm application to maintain its heat, shews that the death of children, in cases where the funis is prolapsed into the vagina, or is without the labia, is not owing to the influence of the air stopping the circulation in it (as some have imagined), but is in consequence of some pressure exerted on it at the margin of the pelvis or elsewhere, more especially as this must almost necessarily take place, in cases where prolapsus must readily happen, that is, in belly presentations :—seventhly, the gradual diminution that was observed, in the force of the umbilical arteries, for ten or fifteen minutes before they ceased to beat, marks, I conceive, the uterus recovering its tonic contraction ; for so soon as it began to pucker up, the circulating force, both in it and in the placenta, was diminished ; at length it contracted so much, as to entirely impede that of the placenta, and eventually throw it off. At what precise moment this happened I cannot determine, as about fifteen minutes were employed in exertions to save the child, and during which time, I did not touch ; but suppose it took place at the time the circulation in the funis stopped, or very quickly after, for as I have observed before, when I went to deliver the placenta, I found it loose in the vagina.

How much longer the child might have lived, had not its connection with the mother been destroyed, I cannot pretend to determine, but think it probable, it might have continued, as long as that circulation may have been maintained. It appeared to me to have been entirely dependant on the mother for the

support of its short life, for almost instantly after the pulsation in the funis stopped, it expired. And if we take a nearer view of the circumstances that attended this case, we shall not find the situation of the child after its delivery to be so very different as we at first sight might imagine---It was still connected to, and supported by, the mother; it was not surrounded by the liquor amnii, but this is by no means directly essential to the child, as we find many children born alive after it had been evacuated many hours, days, or even weeks, agreeably to some. The only circumstance of difference that strikes us forcibly is, its having breathed; but, even this is not sufficient to do away the possibility of its continuing to live, as long as it could be nourished by the mother, since it failed producing its most common and important effect, a change in the circulation of the blood.

Besides what has just been said, I think this case very naturally suggests the following queries. How was the circulation between mother and child maintained? Was it owing to any particular structure of the heart of the child? Was it owing to the foramen ovale remaining open unusually long, or in other words, to its having no disposition to close? Or was it owing to any mal-conformation of the lungs, preventing that free circulation through them that is so necessary to the establishment of life? Is this query rendered more probable, by the livid appearance of the face that occasionally took place? Should we not suppose, that a certain specific irritation is necessary to be excited in the lungs, either by the blood, the air, or by both, before the obliterating process (if I may be allowed the expression) can take place at the foramen ovale? and that something more is necessary to produce this, than the mere expansion of the lungs? or does it only suppose that, when this want of disposition in the foramen ovale exists, the circulation through the lungs cannot properly be established?

TO DR. JOHN REDMAN COXE.

DEAR SIR,

I FORWARD the caſe of a ſtill-born child, that I promiſed you ſome time ago. I join with it ſome experiments made with the black oak bark, in the cure of fevers. Should you think them worthy of notice, you may give them a place in your Muſeum; they are neither lengthy nor flowery, but they are true and correct, and vouched by your well-wiſher and friend,

J. C. ROUSSEAU.

Philadelphia, 29th July, 1805.

Caſe of a ſtill-born Child reſtored to Life; proving, that in the moſt deſperate Caſes, proper Means ought to be uſed to recal ſuch Children to Life. By J. C. ROUSSEAU, M. D.

ON the 21ſt of March laſt, I was deſired to attend Mrs. O****, come to the full time of her pregnancy. Her labour began with a violent flooding, which being, by proper means, ſtopped, every thing progreſſed regularly.

The head of the child having at laſt engaged in the pelvis, and beginning to make its appearance at the os externum, I gave her hopes of a prompt delivery; upon which ſhe informed me, that ſhe had never been, in any previous labour, delivered in bed; and it was her wiſh to, and ſhe immediately did, place herſelf kneeling down at the foot of the bed.

Her labour being quick, the child was ſoon born, and as I ſuſpected from the flooding, without any ſign of life. I had hardly any time to turn the child in my hands, when, without

any warning, ſhe jumped into her bed, leaving a lifeleſs child in my hands, with its placenta pulled out upon the floor.

My feelings upon this embarraſſing occaſion may be more eaſily felt than deſcribed. The mother had the firſt right to my cares; the child's life was in the utmoſt danger: there was no alternative. I went to the mother, after having delivered up the child to an aſſiſtant; and, at the ſame time called for warm water, which fortunately was at hand. Finding no flooding, and every thing in a fair way with the mother, I returned immediately to the child.

It gave no ſign of life; but finding the pulſation ſtrong in the cord, and perſuaded, as I have always been, that an organic life exiſts a long time after birth, between the child and placenta, even when detached from the uterus, I immerſed both child and placenta in a tub of warm water, and then ſtooping over the child, and placing one of my hands on his back, and the other on its breaſt, I encloſed his noſe and mouth in mine, began to inflate its lungs, and expel the air alternately by the preſſure of my hands.

I continued this operation for three quarters of an hour, before the child exhibited any ſigns of life, ſtopping now and then to obſerve whether I could perceive any natural motion of the thorax. It was not long after, when the thorax began to move, and the child inſpired once. About half a minute elapſed between the firſt and ſecond inſpiration. This interrupted life, if I may ſo call it, laſted better than a quarter of an hour, during which time I ſtimulated the noſe and fauces of the child. The reſpiration becoming quicker and quicker, I began to ſtop gradually by preſſure of my finger on the cord, the pulſation that was ſtill very ſtrong, and in a ſhort time I ſeparated the child from the placenta, and had the ſatisfaction to ſee both mother and child perfectly free from danger.

This child is now as hearty and robuſt as any other child of its age, appearing to have received no injury from ſuch an uncommon entrance into life.

Can we not infer juſtly from this caſe, that unexperienced midwives, daily loſe children whoſe lives might be ſpared by the ſame means?

I have ſeen a number of inſtances where I recalled ſtill-born children to life, after half an hour; but with this difference, that the placenta was in utero, and I took every precaution not to injure the funis.

I cannot leave this ſubject without mentioning a caſe of preternatural labour, where, after the birth of the child, hardly any pulſation was to be felt in the cord; but it rapidly increaſed as ſoon as I began to inflate the lungs, although full half an hour elapſed before the child exhibited ſigns of life, and I have the ſatisfaction to ſay that this child is now robuſt and hearty.

On the Efficacy of the Black Oak Bark of America in all Diſeaſes in which the Peruvian Bark has been uſed with Succeſs. By J. C. Rousseau, M. D.

THE high price of Peruvian bark and its ſcarcity induced me, ſome time paſt, to try whether it could not be replaced by ſome ſubſtitute. The black oak bark had been uſed in our Diſpenſary, but finding that it had not the leaſt effect, I had deſiſted preſcribing it.

Being, ſome months after, by the politeneſs of Mr. Benger, ſupplied with a parcel of the powder of the ſame kind of bark, prepared by himſelf in his manufactory, I found it ſo elegantly manufactured, and ſo much ſuperior in fineneſs to any other powder uſed in medicine, that I reſolved to make a new and complete trial of its virtues.

Upon a ſtricter inquiry, I found that the black oak bark, that had been given to my former patients, under the care of the

Diſpenſary, was ſo coarſely powdered, that few or none of them had taken it; and nothing could be ſaid, either in favour of, or againſt it, from all my former trials.

The firſt patient, T. G. who fell under my care, was a journeyman printer, a drunkard. He laboured under a tertian fever, and had been trying himſelf ſome of the Peruvian bark, without effect.

I adminiſtered the black oak bark, and he took it in the doſe of nearly two ounces a day, in the time of the intermiſſion. The enſuing paroxyſm was very moderate, and he miſſed entirely the next. Having continued the bark for a few days, he had no return of the diſeaſe.

Extremely ſatisfied of my ſucceſs, I went in ſearch of patients labouring under intermitting fevers. A ſecond trial anſwered as completely my expectation as the firſt. A third, fourth, fifth and ſixth, gave me not the leaſt diſappointment, and all were free from fever in three or four days, after uſing the bark.

I had until then given it in a very large doſe, but thought of trying whether a ſmaller one would not be as efficacious. Numerous trials, where the bark was not taken in a doſe of more than an ounce in twenty-four hours, met all with the ſame ſucceſs.

During the lapſe of time that I was engaged in my experiments, I had ſeveral opportunities of trying the ſame bark in a number of caſes where Peruvian bark alone would have been adminiſtered, and it proved equally as beneficial as if this laſt had been taken.

It remained to try it in thoſe fevers deſcribed by Alibert,* and cured ſo ſucceſsfully by the Peruvian bark; I did in no inſtance whatever, fail to ſtop the paroxyſm in two or three days at fartheſt.

The laſt caſe that I had the ſatisfaction, I can ſay to cure, although it is an expreſſion that I make uſe of extremely rarely, was in a lady attacked with a cephalalgick fever, de-

* Medecin de la Salpetriere à Paris.

ſcribed by Alibert: her fever was intenſe, and the head-ache ſo violent, that, to repeat her own words, "ſhe had never heard of or felt any thing equal to it. All the other ſymptoms taken into conſideration, I determined to adminiſter the bark, and, fully perſuaded of the efficacy of the black oak bark, I reſorted to it, finding that this lady's ſtomach could not bear the ſmalleſt doſe of Peruvian bark. She took the black oak bark in the doſe of a drachm, ſix or eight times a day; was almoſt immediately relieved; and her ſtomach did not reject it a ſingle time.

It is a remark I have generally made, that the black oak bark is leſs nauſeous, and not ſo apt to excite vomiting as I have found the Peruvian bark to be. I do not even recollect a ſingle inſtance where the black oak bark was thrown up, at the time I adminiſtered ſuch a large doſe as that of two ounces a day.

Upon the whole, and eſpecially from the ſucceſs of my trials, I cannot but recommend the introduction of the black oak bark in our ſhops, warrant its efficacy, and place it on a parallel with the coſtly and very often adulterated Peruvian bark.

An enumeration and relation of all the caſes which I cured with the black oak bark, would be too lengthy for a periodical work; its merit muſt reſt, until further trials, by other medical gentlemen, upon my own character and veracity, *

* The editor is happy to be able to confirm the merits of the above mentioned remedy, from the reſult of ſeveral caſes which have occurred to him; and he truſts theſe facts will lead our practitioners to a more frequent trial of our own indigenous and valuable articles of the materia medica.

Account of the Efficacy of Sugar of Lead, in a Case of Epilepsy. *By* Dr. Thomas R. P. Spence, *of Accomac County, Virginia.*

July 23d, 1805.

Sir,

THE duty I owe society, the medical faculty in general, and Drs. Church, Wistar and Rush in particular, induces me to make this communication, being a history of my own case of epilepsy—requesting for it, if you see proper, a place in your Museum.

My first attack was in the 23d year of my age. On October 13th, 1803, as I was riding I fell from my horse, without any premonitory symptom whatever, and remained insensible (by estimation of the person with me) half an hour. The fit was succeeded with a violent pain in my head, a full, slow and hard pulse, not exceeding sixty-four strokes in a minute. Being confident it was an epileptic attack, from being hereditarily predisposed ;* I immediately lost sixteen ounces of blood, and pursued an antiphlogistic course, tolerably strict, until my system was reduced pretty considerably; I then began with the cuprum ammoniacum, and continued some time; but was subject to attacks, or fulness and pain in my head, at every full and change of the moon; which leads me to believe the human system, particularly in this disease, is subject to lunar influence; for when I did not recollect the full and change, I could discover it by my feelings, particularly by a sensation of fulness and pain in my head.

I continued more or less subject to attacks of the same kind until 27th of May, 1804: I went to Philadelphia, and consulted the above mentioned medical gentlemen, who recommended me to persevere in the plan I had adopted, and to make trial of mercury, zinc, and lead. I first began with mercury, and found that it would suspend the disease, particularly the pain in the

* My eldest brother was first attacked at about the same age; another had it from his infancy, and died about the age of puberty.

head, for two months; but when the system was unimpregnated with mercury, would immediately have an attack, at the next lunar period; which induced me to keep up for seven months, a pretty considerable ptyalism, and twice a salivation. I must also observe, that I used bleeding once a month, regularly. My pulse during this time was from seventy-eight to ninety, but seldom exceeded eighty-four in a minute.

I experienced no inconveniency from the mercury, more than the sore mouth. There was a greater discharge of urine during its use: and that quite transparent, which had not been the case for three years previously.

Having considerable practice during the autumnal months, I found that riding on horseback in the sun, at this season, produced great fatigue, and operated as an exciting cause, affecting my head very much with pain. I had only four fits from the 27th May until the 6th December of the same year. All kinds of exercise producing fatigue had similar effects; but I think gunning was most injurious. The report of a gun would affect my head and pulse. I was pleased with the amusement, and undertook it on horseback to prevent the fatigue of walking; but the report was still injurious. I was most subject to the complaint after going to bed, during the inaction of sleep. In September 1804, I was so much reduced by the regimen and medicine, that I left off the mercury during this month, and tried the cold and shower bath; but with considerable disadvantage. Two attacks during this month. I then continued the medicine, October and November, and had another fit after gunning, on the 6th of December.

All hopes of recovery being nearly extinguished, and life irksome, I determined to give the sugar of lead as fair a trial as I had done the mercury, and to push it to a considerable extent, let the consequence be what it might. The good effects of its use in children by Dr. Rush, gave some encouragement; while the insignificancy attending its use in adults, mingled rather more fears than hopes. In several cases in which the Doctor used it, not one case was cured; and only one was sus-

pended a few weeks. I therefore, with reluctance, began and took of sacch. saturni one-fourth of a grain three times a day, and increased the dose in one week to one grain; and continued with that for the space of two weeks, and then increased it to eight grains twice a day; and continued taking it in this quantity three or four weeks, with, I may say, happy effects; not one symptom of my former complaint all this time; my pulse from seventy-eight to eighty-four in a minute.

The sensible effect of the lead for the first two weeks, was only a little costiveness; afterwards, a sponginess of the gums came on, with a dark livid appearance around the dentes incisores; small flow of saliva; fœtid breath; although my teeth were loose, my mouth was not sore; a very great increase of urine more than when I took mercury; costiveness, sometimes for two days, and then the fæces quite black and compact; my upper extremities, particularly my elbows, affected with pain in the morning.

Although apprehensive of serious consequences I still determined to go on with the medicine, and lose some blood to assist it; accordingly, on the evening of the 24th January I lost sixteen ounces; my arm bleeding accidentally the next morning, I lost, by estimation, eleven ounces more. I now for the first time, lost all appetite for food, and continued three or four days without eating any thing; this was succeeded by pain in the epigastrium, extending down below the navel, in the spine, and region of the liver, which continued ten days, very excruciating indeed; I took laxatives, opiates, in large and repeated doses, together with a long catalogue of medicines without any relief for the time above specified.

The pains continued very obstinate, but less severe, about six weeks; those in my arms were not gone, and extending to my legs, rendered standing impracticable. During the continuance of these pains I was bled five times; the blood after standing twelve hours had very little or no serum; and the crassamentum was of a dark, livid appearance.

After trying almoſt every medicine that imagination could ſuggeſt, and being in a ſtate of ſlow convaleſcency, I found the greateſt effectual relief from chalybs ppt. and myrrh; this firſt reſtored my appetite. * Since recovering my health, my ſtomach appears to be ſo much contracted, that I cannot eat more than two-thirds or half as much as I could, or was wont to eat before, without a ſenſation of conſiderable fulneſs. During the artificial diſeaſe from lead, my pulſe did not exceed ſixty or ſixty-four ſtrokes in a minute; and ſince, from ſeventy-eight to eighty-four is its natural ſtandard.

It has now been ſeven months ſince I began with the internal uſe of the ſugar of lead; ſince which time I have not had the leaſt ſign of my former epileptic complaint; except once, after fatigue in the hot ſun, I had conſiderable pain in my head.

I was bled every month during the time I uſed mercury, without any ſenſible relief from it; and am led to believe it an injurious plan to purſue in this complaint, from the following conſideration. Hemorrhage, or blood-letting to exceſs, will produce plethora, and I believe where that is uſed in a healthy ſtate of the ſyſtem, as in epilepſy where there is no *general* morbid excitement, it muſt do harm by occaſioning a predifpoſition. Moreover, if it has any good effect, that good effect is loſt by not attending particularly to the operation at a particular period of the moon; which,

* I was very ſanguine in my expectations from opium on hearing my friend Dr. I. Stevenſon ſay, "That he attended the caſe of two children, one ſeven, the other nine years old, who eat a quantity of white lead for chalk; they both had very ſevere pains in the abdomen, occurring at intervals; their ſkins were remarkably yellow; their bowels were nearly natural or rather coſtive; laxatives produced very black ſtools, but no alleviation of pain; opium was ſo good a palliative that he had recourſe to nothing elſe; it ſeemed plainly indicated, neither of their pulſes beat oftener than thirty-ſix, and very ſoft; opium rendered the intervals of eaſe longer and longer, until the pains vaniſhed altogether in about five or ſix days."

when neglected, renders the attacks more frequent and more violent.

Queries.—Whether or not has my taking the sugar of lead so soon after a course of mercury, produced those happy effects of relief, which were not obtained in adults by the use of the same medicine?

Whether or not have the good effects of the medicine proceeded from its direct sedative operation; or from its contracting the stomach, and by that means obviating plethora?

What is the *modus operandi* of saccharum saturni taken internally? Is it a sedative or a stimulant?

Perhaps the pen of some speculative theorist might be advantageously employed in answering these queries. I am content with having experienced the beneficial effects of the medicine, and giving a narrative of facts and circumstances which led me to it.

These facts I have thrown together without much regard to order, or systematic arrangement; they are related with all the fidelity my memory will admit of; I wish I could have avoided reasoning on them; but as a celebrated author observes—"As thorny as the subject appears we must approach and handle it;" perhaps they may serve as one round in the ladder, by which we may finally climb to the summit of medical science.

THOMAS R. P. SPENCE.

Dr. John Redman Coxe.

On the Generation of the Septic Acid, from Neglect of Cleanlineſs.

By Dr. John Brickell.

Savannah, June 15th, 1805.

Sir,

I HAVE been waiting for time and circumſtance to furniſh ſomething new and intereſting, when I ſhould reply to the letter with which you were pleaſed to honour me ſome time ago.

I recollect that previous to my attending the hoſpitals in my youth, the Eſſay of Mr. Percival Pott, of London, was publiſhed, relative to ſome inſtances of mortification of the toes, which he found extremely difficult to cure.

Cinchona, he ſtates, did no good, the excruciating pains induced him to give opium, and he waſhed the parts with milk. After long ſuffering, ſome of his patients died, ſome recovered.

Two or three patients with mortified toes were received in the hoſpital at different times; which, on being reported to, and examined by, the phyſicians and ſurgeons, they directed to be treated according to Mr. Pott's method. In purſuing this plan, I had their ſores often waſhed with mild ſoap ſuds. They all got well much ſooner than we expected.

Some time ago a perſon came to me for advice for his toes, which had begun to mortify. On examination, it was evident that he had not waſhed between his toes for a long time. Recollecting ſome important diſcoveries of Dr. S. L. Mitchill, of New York, I put ſome ſlips of litmus and other teſt papers, between the toes of each foot. The litmus paper ſoon became red, which, together with the ſmell, ſatisfied me, that the long continued contact of the local ſordes, united with the local diſcharge, had, by generating the ſeptic acid, begun the proceſs of mortification.

I had, between the toes of one foot waſhed with lime water; and a weak ſolution of carbonated potaſh applied as often be-

tween the toes of the other. The man got well very ſoon: thoſe waſhed by the lime water were ſooneſt well, which may be attributed to the antiſeptic quality of the lime united with its aſtringent effects.

Here then is the ſolution of the problem, of the patients under my care in the hoſpital, getting well ſooner than expected; *the alkali of the ſoap waſh*, which entirely eſcaped us at the time.

Some healthy perſons are ſubject to ſtinking breath. This moſtly ariſes from the contents between the teeth rotting for want of cleanlineſs: let theſe contents be removed, the parts be waſhed with water very ſlightly warmed, daily, and then well waſhed with lime water, the breath will be ſweet, and the cauſe of rotting the teeth will be removed.

In the pyroſis ſputatoria, I examined the fluid vomited up; it proved to be ſtrongly alkaline; acid of any kind cures it. The perſpiration however ought to be examined, and if ſtopped ought to be reſtored; for ſpaſm on the ſurface is apt to produce vomiting, which may, by inverting the periſtaltic motion, draw into the ſtomach the bile poured into the duodenum. It is indeed to be remarked that ſometimes an acid, ſometimes an alkali, prevails in the ſtomach, which are eaſily detected, in the contents vomited, by chemical teſts, and cured by their oppoſites.

I am, Dear Sir,

Yours, with great reſpect.

JOHN BRICKELL.

Dr. John Redman Coxe.

P. S. Laſt ſummer a friend of mine ſent me a brace of plover, in the afternoon; I ordered them cleaned and kept for next day's dinner. When the time came for cooking them they ſmelt offenſively: I directed the cook to waſh them well in ley, and broil them; when brought to table they had not the leaſt offenſive ſmell, and were extremely delicious.

An Account of the Virtues of some American Trees, Shrubs, and Plants. By JAMES MEASE, M. D.

Philadelphia, August 15, 1805.

DEAR SIR,

I SEND for publication, a short account of the medicinal qualities of certain American trees, shrubs, and plants, which deserve much more attention from our brethren, than they appear hitherto to have experienced. The effects which I have stated to be produced by them, have either been never publicly stated before, or so slightly noticed, as not to make any general impression: however, their importance should induce medical gentlemen in the country, to attend to their cultivation, and I hope they will omit no opportunity of adding to the respectable list which we have already obtained of American remedies, as an immense saving would thereby be caused not only to themselves, but to the country in general; whence we now export many thousand dollars annually for remedies, which with few exceptions might be safely dispensed with.

With the sincerest wishes for the success of your work,

I remain,

Affectionately Yours,

JAMES MEASE.

DR. JOHN REDMAN COXE.

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1. *Ulmus Americana* of Marshall, American rough-leaved elm tree. Red elm.

From the great importance of this tree, I am induced to transcribe Marshall's description of it.

"This tree rises to the height of about thirty feet, with a pretty strong trunk; dividing into many branches, covered with a lightish-coloured rough bark. The leaves are oblong, oval and sharp-pointed, somewhat unequally sawed on their edges, unequal at the base, very rough on their upper sur-

face, and hairy underneath. The flowers are produced thick upon the branches, upon ſhort, collected footſtalks; and are ſucceeded by oval, compreſſed, membranaceous ſeed veſſels, with entire margins, containing each, one oval compreſſed ſeed." *Arbuſtrum Americanum, Philadelphia*, 1785. Cruckſhank.

The virtues of this tree, were firſt publicly noticed by Dr. Samuel L. Mitchell, in the year 1789: He obſerves, "That the inner bark, by infuſion, or gentle boiling in water, affords a great quantity of inſipid mucous ſubſtance, that may be employed with ſafety as food; I have eaten it repeatedly, and found it to agree with me perfectly well, and when mixed with ſugar or with lemon juice, it became very palatable. The knowledge of this fact may be very ſerviceable to ſuch travellers, in the unſettled parts of our country, as loſe their way, or fall ſhort of proviſions. It has been beneficially adminiſtered in catarrhs, pleuriſies, quinſies, and applied as a poultice to tumours, and as a liniment to chaps and feſters." *Carey's American Museum*, Vol. VII. 1790.

The following additional facts upon this tree which were communicated by Dr. Joſeph Strong of Philadelphia, have already been inſerted by me in the *Domeſtic Encyclopædia*, (Art. *Elm*) but may be with great propriety introduced in this place, on account of the important information they furniſh.

Dr. Strong ſtates, that during the time he ſerved as ſurgeon in the army on our weſtern frontiers, he experienced the moſt happy effects from the application of poultices of the red elm bark, to gun-ſhot wounds, which were ſoon brought to a good ſuppuration, and to a diſpoſition to heal. It was applied as the firſt remedy. When a tendency to mortification appeared, the bark bruiſed and boiled in water, produced the moſt ſurpriſing good effects. After repeated comparative experiments with the other common emollient applications, as poultices of milk and bread, and linſeed, its ſuperiority was firmly eſtabliſhed. He particularly ſtated to me the caſes of the wounded in the action, in which the late general Wayne de-

feated the Indians, in August 1794, as proving, in the most evident manner, the beneficial effects of the poultice. In old ill-conditioned ulcers, and in fresh burns, equal benefit was derived from it. In diarrhœas and dysenteries, an infusion of the bark was used with advantage as a diet drink. A soldier who lost his way in the woods, supported himself for ten days, upon the mucilage of the elm, and on sassafras twigs. From the above facts, the red elm tree may be considered as a highly valuable addition to our stock of medicines, exclusively American, and ought to be carefully searched for by all medical gentlemen in the country, and its virtues proclaimed, in order that the farmers upon whose plantations it may be found, may preserve it from the indiscriminating axe.

2. *Sesamum Orientale*, or *Vangloe*, of the West Indies, *Bene*, or *Binny*, of the Carolinas, and Georgia.

This plant has been known for a long time in Africa, where the seeds were employed as horse food, and for culinary purposes. Sonini and Brown, mention the use of the seeds, for the above purposes at the present day in Egypt, and in the Carolinas and in Georgia, they are constantly boiled by the negroes with their allowance of mayz, by which it is rendered more savoury. The seeds abound in oil of a very fine quality, fully equal to that of Florence, according to Mr. Morel of Savannah. See his paper in the Amer. Phil. Soc. Trans. Vol. I.

We are indebted to the public-spirited James Simons, Esq. of Charleston, S. C. for a knowledge of the virtues of the leaf of *Sesamum*, in the dysentery, a disease which unfortunately too frequently commits great ravages in our country settlements. During the summer and autumn of the year 1803, it prevailed to a great degree in the state of South Carolina; and from several statements in the Charleston papers, it appears, that a watry infusion of the leaf was attended with the most remarkably good effects in the complaint. It is also stated, that the leaves retain their virtues in a dried state. As from my experience, the plant comes to perfection in Pennsylvania,

it would be well to cultivate it; and in order to give an opportunity of fo doing, I have placed feed procured from Georgia, in the hands of B. M'Mahon, feeds and nurfery man, Chefnut ftreet, who has undertaken to deliver it to applicants. I hope that thofe who may make future trials of the plant in the dyfentery, will furnifh your ufeful work with the refult.

3. *Prinos Verticillata*, Virginia winter berry of Marfhall; black alder. The utility of the bark of this fhrub when joined with that of *cornus florida*, or common dogwood, in intermittent fevers, is very generally known to the people inhabiting the fickly parts of the ftates of Pennfylvania, New Jerfey and Delaware; but the knowledge of its efficacy in mortifications, when united to the root of faffafras, is much more confined. I have received however, fuch an account of the fuccefs of the combination, in the above complaint, from Jofeph Cooper, Efq. of New Jerfey, that I am induced to recommend in the moft urgent manner the ufe of it. A decoction of the bark is to be mixed with a little fpirits, and when mixed with flour is to be applied to the parts. The decoction is alfo to be taken freely. Mr. Cooper related to me feveral inftances of the efficacy of this treatment in apparently defperate cafes of mortifications, even after the Peruvian bark had failed in checking the progrefs of the difeafe, which have determined me to add it to my materia medica.

4. *Sanguinaria Canadenfis*, or blood-root, red root, is a very common plant in our woods. An inaugural experimental differtation on it was written by Dr. Downey, of the Univerfity of Pennfylvania, in the fpring of 1803. Among the virtues afcribed to it in that differtation, one is unnoticed, which probably renders this plant of more value than any of its other virtues. I allude to its efficacy in removing jaundice. Shoepf barely mentions its ufe in that complaint; p. 86.) but my authority for its utility therein, is Thomas Cooper, Efq. of Northumberland, who in a letter which I lately received from him, mentions, that Dr. Smith of Wilkefbarre, in Luzerne county, has for fome years paft ufed the powdered root, with

great ſucceſs in doſes of 15 or 20 grains; and further obſerves that it is a chief ingredient in the quack medicine, known by the name of *Rowſon's bitters*, which are in great repute among the illiterate.

Dr. Muhlenberg of Lancaſter, informed me, that in the caſe of a young woman, who ſwallowed the ſeeds of *ſanguinaria*, a temporary alienation of mind was produced.

5. *Aſclepias Decumbens*, or *Pleuriſy root*. Among the properties which this vegetable poſſeſſes, that of being a diuretic has never yet been publickly noticed. I have not uſed this plant myſelf, but my friend Mr. James P. Willſon, of Lewes, Delaware, has aſſured me that it is both ſafe and powerful, and has been frequently uſed with benefit in that part of the country.

Collinſonia. Horſe-weed, knot-root, knot-weed. The hard knotty root of this plant, when infuſed in cyder, has acquired much credit in dropſy, and in the caſe of an old lady, a cure was evidently effected by the remedy thus exhibited.

6. *Aralia Spinoſa*. Commonly called, prickly aſh, angelica tree, tooth-ach tree.

A watery infuſion of the inner bark and root of this tree has a powerful effect in removing the pains of chronic rheumatiſm. It is poſſeſſed of a conſiderable degree of acrimony, and powerfully affects the ſalivary glands. A moderately weak infuſion, excites perſpiration and does not nauſeate: but a ſtrong doſe ſeldom fails to produce that effect. I have had the moſt decided proofs of the efficacy of this remedy in rheumatic affections, and therefore can ſafely recommend it. Some perſons infuſe the bark in ſpirits; but this practice I do not approve of, being well convinced long ſince, that where water can extract the active principle of a vegetable, a ſpirituous tincture ought never to be reſorted to for internal purpoſes. A ſtrong tincture, however, of the berries is ſucceſsfully applied to hollow teeth when aching.

7. *Aralia Nudicaulis*. The roots of this ſpecies of *aralia*, may be ſubſtituted for ſarſaparilla, and doubtleſs uſed with

more fuccefs than that expenfive medicine, of whofe virtues I have no opinion: indeed I cannot help wondering at the folly of medical men in continuing to prefcribe it, after the experience which they muft all have had of its inertnefs. A watery infufion of *aralia nudicaulis* is taken in fome parts of this country, as a remedy for that fpecies of eryfipelas ufually termed fhingles: it is alfo fometimes ufed by the farmers as a tonic, in cafes of a relaxed ftomach and lofs of appetite.

8. *Arum Triphyllum.* Indian turnip. The acrimony which the freſh root of this common vegetable of our country poffeffes, is well known. It would be well for thofe who are remote from medical aid, if the knowledge of its virtues was equally well diffufed. I have known it fingularly beneficial in the afthma, particularly in old people, and in the croup, and hooping cough. The following form of its exhibition anfwers beft.

Grate one dried root, and boil it in half a pint of milk. The rule for its exhibition, in a general way, is to give it of fuch a ftrength, as that fome acrimony will be perceptible to the tongue and throat. It never affects the general circulation, but acts folely on the parts juft named; to the glands of which it is a powerful ftimulant, caufing a copious fecretion of mucus.

9. *Chenopodium Anthelminticum.* Wormfeed. I fhould not have mentioned this well known plant, were it not for the purpofe of informing your readers, that an effential oil is extracted from the feeds of it, which is equally, if not more powerfully deftructive to worms than the feed. The dofe being fo much fmaller than that of the feeds, renders the oil highly valuable. The worms are killed by the oil and are difcharged without form. The preparation may be obtained at Baltimore.

10. *Geranium Maculatum.* This valuable plant is called in New Jerfey, and in fome parts of Pennfylvania, by the name *crow-foot;* but as there are other plants which bear the fame trivial name, I will here defcribe the fpecies of *geranium* I

am now conſidering. In England the common name of the genus *geranium*, is *cranes-bill*, and under that title, Dr. Willich treats of it in the Domeſtic Encyclopædia. Martyn enumerates 32 ſpecies of *geranium*.

Geranium maculatum. Root perennial, ſtems ſeveral, about a foot high or more, dividing by pairs; from the middle of the diviſions come out the peduncles, which are pretty long and naked, each ſuſtaining two pale purple flowers, with entire petals. Leaves five-parted, gaſhed, the uppermoſt growing immediately to the ſtem, without any foot-ſtalk, (ſeſſile); flowers in May.

This excellent vegetable is happily very common near Philadelphia; it abounds alſo about Woodbury, New Jerſey, and ſhould be tranſplanted into every garden. The powerful effects produced by a decoction of the root in milk, in bowel complaints, particularly of children, are well known; but its efficacy in ſtopping bleedings is known but to few. I have, however, been ſo well informed of two caſes, in which the moſt obvious advantages were derived from the application of the root to the bleeding orifice, that I think proper to mention them, and to urge the trial of the remedy to all who may be ſo unfortunate as to require its uſe.

The firſt caſe was related to me by the excellent Mr. *William Bartram*, who ſtopped a moſt profuſe hemorrhage in the ancle, from a wound by an adze. From the pulſatory manner in which the blood flowed from the wound, there could be no doubt of the diviſion of an artery.

The ſecond caſe was ſtated to me by Mr. Paul Cooper, of Woodbury, New Jerſey. The particulars I do not at this time recollect, except, that the hæmorrhage was very obſtinate, and reſiſted a variety of powerful aſtringents which were applied by the phyſicians of New Jerſey, and of this city. I will procure a ſtatement of the caſe, and ſend it to you.

Account of the Dissection of a singular Lusus Naturæ. *By* DR. J. B. DAVIDGE.

Baltimore, August 6th, 1805.

SIR,

THE enclosed is a copy of a letter written to Dr. M'Kenzie of this city, in 1803. If you think it entitled to a place in your Medical Museum, a periodical work of considerable merit, you have my permission to insert it.

Accept the homage of my esteem,

JOHN B. DAVIDGE.

DR. COXE.

Baltimore, March 10th, 1803.

DEAR SIR,

AGREEABLY to my promise, I send to you a correct detail of the phenomena, as they appeared externally, and were discovered upon dissection, in that singular lusus naturæ of the human kind, your friendly courtesy furnished me with; and I solicit you to accept for the favour you granted to me, of using the preparation in my lectures, that return which a mind conscious of an obligation naturally offers.

On the first view, the external sexual parts have all the characters of those of man. The apparent penis emerges from the usual part of the pubes. In size and length it fully measures with the penis of a youth of fourteen, the age of your patient. Its glans and præputium are perfect and natural, to a youth at this period of life; but upon examining I can find no urethra or perforation at its apex; a pit or slight excavation is all that is discoverable.

About half way down this fictitious penis, or real, though preternatural clitoris, there is, posteriorly, an attempt at an urethra; but having penetrated about three-fourths of an inch, it ends in a kind of cul de sac, or blind duct. It receives with ease the smaller end of a blow-pipe.

Leaving this doubtful member, we are led to examine the two fleſhy emboſſments, which, forming the labia pudendi of the moderns, or alæ majores of the ancients, paſs from before backwards; but nature, to aſtoniſh us the more, has departed more widely from her ordinary route in this ſtep, than in forming a clitoris of three inches in length. Inſtead of labia pudendi, we have preſented to us a ſcrotum, complete in its ſtructure and figure, if we except a ſlit, of about an inch and an half from its anterior to its poſterior commiſſure, running from the inferior part of the fictitious penis poſteriorly, and conſtituting the rima cunni of Albinus. So confounded with, and obſcured by the common and numerous rugæ of the ſcrotum, is this ſlit, that it is not diſcovered otherwiſe than by mechanically ſeparating the two lateral portions of this rugoſe bag. From the poſterior commiſſure, or angle of the rima, a raphe, analogous to that of man is continued to the anus. About three-fourths of an inch, tracing from the anus anteriorly along the courſe of the ſeam of the perinæum, is an aukward endeavour, in appearance, to effect a perforation; but it can remain as an index only, not being permeable to the ſmalleſt briſtle, that nature had not wholly loſt ſight of her general laws, but choſe in the preſent inſtance to play with their powers, and free herſelf a little from the dull formality of unity.

The left lateral diviſion of the ſcrotum, has all the appearance it would have in a youth, who might force up to the abdominal ring, the teſticle, and leave the bag pendulous. It is otherwiſe with the right. This contains a body ſimilar to a teſticle, without its epididymis, and ſufficiently mature for the age of fourteen. The dartos muſcle is natural, and evidently capable of alternate, free relaxation and contraction. The teſticle, or miſplaced and very much enlarged ovarium, has its proper tunica vaginalis, and is appended to a cord, in no external character diſſimilar from the ſpermatic. At the inferior end of which cord there are three diſtinct fimbriæ. But as above hinted, there is no epididymis; the cord aſcends, and paſſing through the abdominal ring, is ſoon loſt in the ligamentum rotundum of the right ſide, to be deſcribed hereafter.

The nymphæ, ſhielding the entrance into the vagina, are in a great degree natural, though rather ſtarved, as they ſhould protrude themſelves at the age of your patient, a little beyond the labia pudendi, or what, in ſtrict juſtice, we may call the lateral portions of a perfect ſcrotum. For by ſome ſtrange caprice of nature, the labia pudendi have been forced to yield, in our ſubject, their rights, to the overbearing inſolence of ſcrotal claims.

A little ſubſequent to the death of the perſon from whom our preparation is taken, you inform me that the vagina admitted the finger with facility: it now admits of the introduction of a large blow-pipe.

The os pubis is much larger on the right ſide, than on the left. The mons veneris is natural and well clothed with hair.

The characteriſtics of the parts, internally, decidedly announce in behalf of the female. The uterus or matrix is natural. The ligamentum latum, tuba fallopiana, fimbria and ovarium of the left ſide are not deformed with any thing preternatural; and the broad ligament with its fallopian tube are perfect on the right ſide; but here there is neither ovary nor fringe.

At the exterior edge of the right broad ligament there is a long narrow ſac; the walls of which are of extraordinary thickneſs, and in their texture approach to callus. It will receive about two drachms of water, and terminates in the vagina, in the form of a meatus urinarius. This ſac is unqueſtionably the urinary reſervoir, or bladder.

The ligamentum rotundum of the left ſide, riſes naturally, from the body of the uterus, and paſſing out through the abdominal ring of its own ſide, loſes itſelf in the external parts.

The round ligament of the right ſide begins in that part of its correſponding broad ligament, where the right ovary ſhould have been, and after paſſing on a ſmall diſtance, ſuddenly expands to the ſize of the ſpermatic cord of the male, becoming, what I have already delineated the cord, to which the teſ-

ticle, or preternaturally enlarged, and preternaturally collocated ovary is attached.

The right ovary or teſticle (let judges determine) equals the left, which is of common dimenſions, ſix times multiplied.

The above uncommon, and I may add, unparalleled phenomena, for ſo far as the faithful light of natural and medical hiſtory enables us to advance, we explore in vain the archives of nature and medicine for a parallel, I demonſtrated to the gentlemen, among whom I have the honour of allotting to yourſelf a place, who attended my courſe of lectures this ſeaſon.

I have endeavoured to be faithful and honeſt, keeping the path intermediate to the hypotheſis that nature is not uniform in her economy, and that, which admits of no fundamental variety. I have related facts as they are, without ſtraining any one part of the general character to favour this or that naturaliſt.

It would be highly gratifying to the curioſity of the philoſophic naturaliſt to obtain ſome hiſtory of the amatorial appetencies, as they were diſplayed during life, predominant in your patient; but as the incidents neceſſary to ſuch private hiſtory are enveloped in ſhade impervious to the ray of inquiry; and as any particular furniſhed by ſtrangers, would ſerve more to direct the pencil in the general outline of character, than to open a way to the individual ſprings of the paſſions, we muſt be content with interpreting the expreſſion of the leading features of this wild game of nature.

It may juſtly be queſtioned whether the perſon we treat of, be of the hermaphroditical order, and eſtabliſh one affirmative, againſt the many negatives of naturaliſts, in behalf of a human hermaphrodite, as the poſſeſſion of all the ſexual properties of the male and female, will perhaps be urged as neceſſary to conſtitute a genuine hermaphrodite.—It is a ſerious misfortune, that in America we have it not ſufficiently in our power to ſpeak to the world, in the univerſal language of engraving.

If you will excuſe me, I will add what ſome writers have ſaid and written on this ſubject.

In Cheſelden's thirty-third plate we have a repreſentation of "the parts of an hermaphrodite negro, which was neither ſex perfect, but a wonderful mixture of both. This perſon was twenty-ſix years of age, and in ſhape perfectly male."

As it is not unfrequently difficult for us to determine the ſex from the general external form, which is I ſuppoſe what is meant by being "in ſhape perfectly male," without taking into the account the external ſexual parts, I think that this firſt ſtep needs farther interpretation.

Figure 3 refers to "labia or a divided ſcrotum, in which were perfect teſticles with all the veſſels."

Whether Cheſelden intended that we ſhould underſtand from theſe words, that each teſticle had its proper epididymis and vas deferens, I am unable to conclude; nor is the difficulty I meet with here, in any degree leſſened by the circumſtance of our preparation; where there is, from every external character of the body itſelf, contained in the right ſcrotal ſac, every evidence of its being a genuine male teſticle; but how is this evidence affected by the abſence of the epididymis, and preſence of fimbriæ within the tunica vaginalis? To which we might add the fact that there is no ovarium on the right ſide.

Cheſelden has given us no account of the internal parts; he has not ſaid whether there were a uterus and its appendages, the ovaria and fallopian tubes. He makes no mention of the urethra, and we are left to gueſs whether it terminated in the vulva, or paſſed down through the clitoris. Upon the whole, we have not ſufficient authority to believe thoſe bodies, by this learned anatomiſt denominated teſticles, to be of the ſame nature and ſtructure, although they be of the ſame ſize, of the male teſticles; nor have we a right to uſe the language of this gentleman and give to the ſubjects of his plates, a place among the hermaphrodites of nature; as it may be fairly argued, according to a hint above, that a real hermaphrodite muſt poſſeſs every ſexual part of the male and female.

Plate xxxiv of Cheſelden is pretty much in character with his thirty-third.

Plato was of opinion that mankind, with all other animals, were, originally, during the infancy of the world, hermaphrodites, and in proceſs of time were ſeparated into male and female. For this I have the authority of Darwin's Zoonomia.

"La portion du clitoris qui eſt apparente a peu de longueur, et de volume, ſi ce n'eſt dans quelques femmes, où elle égale le bout du petit doigt, le pouce, et même la verge de l'homme." *Baudelocque, tom* i. *page* 93.

"Hermaphroditi veri non dantur." *Ruſch. Thes.*

"Quæ extra venerem in caſta fœmina, parva fuerat, ſuo etiam modo arrigit et intumeſcit ut prepoſteræ veneri ſervire poſſit multoque uſu ejus denique moles ejus augitur."

Haller. Phyſiol.

In Bruce's Travels, and in Travels in Africa, Egypt, and Syria by G. W. Browne, we are told that "the clitoris is always extirpated as a religious ceremony." This ceremony was ſuggeſted by its ſize I ſuppoſe. Thoſe who have a ſufficient facility of faith may accord credit to Bruce's travels.

Yours, with eſteem,

JOHN B. DAVIDGE.

Dr. M'Kinzie.

An Account of the Diseases of Queen Anne's County, Eastern Shore of Maryland, during 1802—3. *By* Dr. G. Williamson, *in a Letter to the Editor, dated Baltimore, June* 12*th*, 1805.

Sir,

THE history of a country so notorious for autumnal diseases, as that of the Eastern Shore of Maryland, would no doubt be gratifying to the reader, who is unacquainted therewith; but as I do not feel myself adequate to an undertaking of such magnitude, it must suffice to say, that that part of the country in which I resided, is low and interspersed with branches, ponds, and swamps, contiguous to some of which there are considerable marshes; there is also a mill pond in the neighbourhood. The upland is a light sandy soil, and very famous for the production of wheat and Indian corn.

As it has long since been known that the neighbouring atmosphere, in countries situated like this, is, during the autumnal months, much contaminated by the disengaged miasma; and that this atmosphere is one of the grand causes of autumnal diseases, I shall not deem it necessary to make any comments thereon.

The cholera infantum, a disease so prevalent in cities, and one so much dreaded by parents, was not very prevalent here; the most of those cases that did occur were easily cured by calomel purgatives, absorbents, &c.

The only case I shall notice of this disease, was that of a child aged about seven months: this child had been labouring under the disease six or eight weeks before I saw it, although I had been spoken to by his father on the occasion some time previous to this; but not then having commenced practice, he was referred to the family physician; the disease still progressing, and the child consequently getting much weaker, a consulting physician was applied to, at which time I was not in

the neighbourhood. Soon after my return, the parents on getting up one morning, observed the child much worse; and in addition to the disease he had long laboured under, they discovered an external affection that much alarmed them, which extended from the umbilical region down to his knees, and which they supposed to be a mortification. A number of the neighbours according to a country custom, were summoned to see the child pay the last debt due to nature. As I was at hand, and the other physicians were not, some of the attendants proposed my being called in; the father consented with observing it was not worth while, as it was too late for any relief to be administered: this prediction I at first thought correct; but as I had been induced from experience to adopt the maxim of "while there is life, there is hope," I prescribed according to the best of my judgment, and am happy to say, that however simple my prescriptions may appear, they had, I believe, the good effect of curing the child, as none others were had recourse to: for the external appearance which I supposed to be an incipient gangrene, cataplasms of bitter herbs, and Peruvian bark were applied, and frequently renewed. Internally, I gave a weak solution of sal tart.—laudan.—et ol. anis. to quiet his bowels which were then much disordered; the tinct. cort. Peruv. was also given in small quantities.

Convulsions in children, and cholera morbus in grown persons, frequently occurred during the sickly seasons of 1802—3, but as nothing peculiar was observable in them or the treatment thereof, I shall proceed to the more formidable diseases, the intermittent and bilious fevers: this part of the country has ever since my memory, been remarked for being propitious to the intermittent fever, but within these few years past they have been more than usually of a bilious nature. The ague and fever of this country like those of most others, are not confined to any particular type, although that of the tertian is most frequent. When first called to a patient labouring under this disease, I generally commenced the treatment with a purgative composed of calomel and jalap; two intentions were had in

view in conjoining the jalap; one was to make the cathartic more active in its operations, the other must be obvious to every physician who may have practised in a country where the citizens are opposed to the use of calomel. I would here beg leave to observe that it never was my wish to give a purge that would operate frequent, but quick; after the primæ viæ were cleansed, barks were given in as large quantities and as frequently repeated as would agree with the stomach of my patient; I found a little Virginia snake root, and salt of tartar conjoined with the bark, answer much better than it alone. Emetics are a favourite remedy with many of those who are subject to the ague and fever, and if they are not indulged with them, they think the physician not master of his profession; owing to this circumstance, I indulged them where I did not think them really pernicious, although I generally prefer cathartics, and believe they answer every purpose; in fact I never prescribe an emetic in any disease unless I think it indispensably necessary, which, by the by, I think much less frequently the case than is generally imagined. In this part of the country liver complaints are frequent and sometimes troublesome, and in my humble opinion there is no remedy we could have access to, so valuable in these complaints as calomel; hence it was that I prescribed it in most diseases where purgatives were necessary, and I was convinced there was nothing to forbid it.

The next disease I proposed treating of, is the bilious fever, and I must here also beg leave to observe that it as frequently partook of the intermittent type, as the intermittent did of the bilious. Yet it sometimes, and not unfrequently, was of the complete remittent type. This disease when properly treated was almost always very manageable; when improperly treated in the first stage by too great depletion, it occasionally degenerated into the typhus fever, frequently proved troublesome, and sometimes fatal. I believe with the illustrious Rush, that debility is the predisposing, and stimuli the exciting cause of this disease: this doctrine if not correct, is in my opinion the most plausible that has yet been advanced; for how evident

must it be that a system previously debilitated, will, by an over portion of stimuli acting on it, be thrown into a morbid action, which is what that celebrated author terms the proximate cause of fever. In the treatment of the bilious fever of this part of the country, I have seldom found it necessary to unsheath the lancet. When first called to a patient labouring under this disease, if his stomach was much disordered, the saline mixture was had recourse to; after his stomach was somewhat quieted, a cathartic composed of calomel and jalap, was given; if a remission did not then take place, a febrifuge mixture of sal. tart. crem. tart. & tart. antimon. was given in some agreeable drink, and as soon as a remission took place, the bark was given; if my patient's stomach would not bear it in substance, I gave it in decoction; when the case would admit of it, lavender compound was added to the decoction of bark with advantage; when I met with a patient who could not take the bark, columbo was had access to.

The two following cases were the most remarkable of the bilious fever that occurred during my practice in Queen-Anne's.

The first was what I conceived to be the highest grade of bilious fever, or that disease frequently termed yellow fever: the subject was a boy aged ten years: preceding this attack he had been indisposed, and taken some medicine prescribed by his old grand-father, who was extravagantly fond of him. The old gentleman is one of those men, who are much opposed to physicians, and it is a very rare occurrence for one to be employed in his family; however, after his grandson had been ill for about thirty-six hours I was called in. When I first saw him he had a high fever, hot skin, pulse quick, and frequent, violent pain in his head, flushed countenance, oppression at the præcordia, pain in his stomach and bowels: a cathartic was prescribed, and he was directed to take the febrifuge mixture as soon as the purge was done operating, neither of which had any effect, which I supposed was owing to his grand-father indulging him with cold water, new cyder, or any thing he

might please to call for: the second day worse, high fever, pulse much as yesterday, pain in his head and bowels increased; delirious, bleeding from the nose, fauces, &c. skin and eyes much yellower than usual, a puking and purging of black grumous matter, not much unlike coffee grounds; when moved he screamed violently, there is a certain degree of wildness in his eyes, and he is almost continually picking the bed clothes. A blister was applied to the back of the neck, and alkaline injections were directed; these however were not tried. The following morning death closed the scene. As my patient was of a delicate constitution, and considerably debilitated by a previous indisposition, I did not think proper to let blood in his case.

The next case was what I termed an intermittent bilious fever; the subject of which was a young gentleman of a robust constitution, although he had somewhat impaired the tone of his stomach by a foolish practice of puking up the contents thereof when in health, merely to gratify the curiosity of his acquaintance. It is not a little remarkable that several children of the same parents possess that command over their stomach, and what is more remarkable is, that it is not owing to their figuring to themselves any uncomely scene, or making any great exertion, as a small effort, from a desire to please themselves, or gratify the curiosity of their acquaintance, is sufficient to produce the wished for phenomenon.

When this young gentleman was first attacked, he was much alarmed, as he had an obstinate puking; and having a few weeks prior to this lost a sister by a similar complaint, he now regretted having habituated himself to a practice so foolish in itself, and one so baneful in its consequence: in addition to the puking he had a high fever with violent pains in the head, back, &c. he had, also, a purging: the saline mixture was first directed to quiet the stomach, after which a purge of calomel and jalap was given, and he was directed to take the bark as soon as the symptoms would admit of it; on the third day the disease returned with greater violence than ever. I was sent

for in haste, but living several miles distant, the symptoms had abated before I arrived: his vomiting had been so severe that he said he thought it must have killed him; the saline mixture and other medicines had been had recourse to, but availed nothing; I directed a continuation of the barks as soon as an intermission might take place: he was now very solicitous for something to relieve his vomiting, as that was, in his opinion, the most alarming symptom he laboured under, and he dreaded the consequence of another attack: after a little reflection, I resolved to give the following mixture, sal. tart. tinct. op. ef. menth. & aq. font. in small quantities, which had the wished for effect, and my patient was soon cured by taking plentifully of bark. I confess, I at first had my doubts respecting the propriety of giving tinct. opii in this stage of the disease, but these doubts were soon removed when I considered that opium was recommended, by the most celebrated authors in the hot stage of intermitting fevers, and also, that in many violent diseases of the stomach, it has the good property of allaying its irritation and quieting it.

In the autumn of 1803, the weather was very dry and warm. Dysenteries were this season prevalent but mostly mild, and generally cured by cathartics, glysters, an alterative pill composed of calomel and ipecacuanha, with strict attention to diet and drink. I did not in a single case find it necessary to have access to emetics or opium, previous to a cathartic. When first called in, I gave a purge of jalap and calomel. I believe with Ontyd, that calomel in this disease not only cleanses the primæ viæ, but it seems to have somewhat of an anti-dysenteric power, for it may be exhibited, even to the most delicate constitutions with perfect safety, and frequently under its use, the gripings and pain abate; after the bowels were evacuated, I had access to the alterative pills, one of which was given three times in twenty-four hours, and the bowels were kept open by means of the ol. ricini. Ontyd when speaking of oleaginous medicines, says, that "they are not only useless but even hurtful, for they often adhere to the intestinal plicatures, contract rancidity, and excite grievous

pains." I must here beg leave to differ in opinion from that author, for so far from considering ol. ricini injurious in this disease, I consider it among the best of remedies that can be employed, insomuch that I believe it has not only the effect of evacuating the contents of the bowels, but has also, the effect of obtunding the acrimony of the offending matter, and healing the internal coat of the injured intestines. The two most obstinate cases of this disease which occurred in my practice were those of married ladies, each of which brought on a relapse when nearly cured, one by drinking cold water, the other by indulging herself with a little cabbage; but by again having recourse to the above remedies, and paying stricter attention to diet and drink, they were again relieved, and soon cured.

Several cases of typhus fever occurred during my practice in this part of the country, but the only one that I shall notice was that of a negro girl aged seventeen years. When I first saw her she was complaining of a pain in her head and back, her pulse was frequent and her bowels disordered; as it was understood she was pregnant, I supposed these affections owing to that cause, and endeavoured to bleed her, but did not succeed, and a gentle dose of the ol. ricini was given her. When I saw her again her disease was a confirmed typhus, the symptoms of debility, lassitude, weariness, desponding countenance, sighing, anxiety and depression of spirits, were prevalent, the pulse frequent, quick, and weak: spiritus mindereri was occasionally given, and the bark in as large quantities, and as frequently repeated as would agree with the stomach; blisters were also applied. Second day, blisters have not drawn, she appears worse, affections of the head increased, pulse as yesterday; she has now tinnitus aurium, delirium without fever, her voice is considerably altered, she frequently awakes from sleep in great alarm, and it is some time before she can be pacified; bark, &c. continued, and the blisters again applied; third day worse, head still affected, has tremulous motion of the tongue, lips and hands; is when awake continually pick-

ing the bedclothes, and when asleep incoherently talking, but her articulation so imperfect as not to be understood. She will raise herself up in bed and call for her clothes, expressing a desire to go a visiting: blisters have not drawn: what more to do than to support the system by bark, &c. I knew not; however, recollecting that professor Rush said in his Lectures, that medicines frequently operate much better after venesection than before, I resolved to see what effect it would have in her case; and as there appeared a great determination of blood to the head, I directed her to be cupped. After taking a few ounces of blood from the back of the head, a blister was applied to the back of the neck which drew remarkably well; from that time my patient began to mend, and was soon cured.

The next and last autumnal disease that I shall notice, is the habitual or chronic diarrhœa, which has, within these few years past, been very rife in this part of the country; but as I have been so frequently thwarted in attempting to cure this disease, I shall treat of it in a very cursory manner. I tried, I believe, almost every remedy that has ever been spoken of as beneficial in this complaint, and far the greater part of them without any advantage whatever. The remedies which succeeded the best with me, were, after giving a gentle dose of ol. ricini, pills composed of opium & ipecacuanha. An eminent physician who practised here some time since, says, he found a pill composed of ginger and cinnamon, have a very salutary effect in this disease; and one who now practises here says, that he first endeavours to produce a determination to the surface, and then gives the acetate of lead and opium, conjoined, with advantage.

In the winter season pleurisies are not unfrequent, and are generally cured by blood-letting, cathartics, blisters, diluent drinks, &c.

During the spring season, catarrhal affections were frequent, and generally pretty easily cured by such remedies as are usually applied in that disease: the only obstinate catarrhal affection that I met with during my practice here, was that of a gentleman of an impaired constitution, who had long since

been troubled with phthisical affections. He tried a great number of the medicines so generally prescribed in that disease, without the wished for effect. The disease still increasing, he became much debilitated and almost exhausted; his cough was very severe, every precaution was taken to prevent its return, and palliatives were applied to shorten its duration, but in vain.

In order to support the system, the bark was prescribed in as large quantities as his stomach would bear: this medicine had a far more happy effect than I anticipated; it not only supported the system, but it also cured my patient. Rashes and scarlet fevers were also prevalent during the vernal months, but were of a slight nature, one case excepted, which was that of an industrious farmer of a delicate constitution and weak breast, owing to his exposing himself in the rain, while the rash was on him—he caught cold, a metastasis took place, and a pneumonic disease was brought on. Blood-letting, gentle purgatives, with a febrifuge mixture, and the antiphlogistic regimen cured him.

With great esteem,

I am, Yours, &c.

G. WILLIAMSON.

Dr. John Redman Coxe.

A Case of Salivation produced in a Child, from a Cent which he swallowed. Communicated to the Editor, by Dr. Wm. Budd.

ON Sunday evening, December 31, 1797, I was called into Callowhill street, to visit a little boy, about three years of age, who had an hour before swallowed a cent; he complained of sickness at the stomach, which was soon succeeded by severe vomiting, and continued until next morning.

January 1st. Complains of pain in the stomach, and of a sore throat; bowels were freely opened with castor oil. 2d. A discharge took place from the salivary glands yesterday, which has increased to nearly one pound in twenty-four hours; it appears to be pure saliva, attended with some swelling of the tongue and salivary glands. The oil which he took yesterday produced several stools, some appear green: he still complains of pain in the stomach. 4th. Complains of great pain in the abdomen, which is swelled and hard; I attribute this to the bowels not having been opened by the accustomed dose of oil, during the last forty-eight hours: his mouth continues swelled, and discharges about a pint a day; begins to have an appetite to eat, but is not able to swallow much of any solid food. 5th. The oil opened the bowels freely last evening, and entirely removed the pain and hardness of the abdomen; the spitting has begun to abate and soreness of the mouth somewhat removed: I ordered his mother to give a dose of castor oil daily, and to give me information when the cent should come from him.

February 7th, I was sent for to-day to see the cent, which came from him this morning without any evident pain, but with a copious bilious stool; the cent was very bright, but did not appear to be corroded by the juices of the stomach and bowels in the least degree. From the 5th of January, until the cent was discharged, he continued to have a sore mouth and throat; and if the oil was omitted for twenty-four hours, the abdomen would become swelled, painful and hard. I ordered a repetition of the oil occasionally, for a few days, to keep the bowels open, by which means the soreness of the mouth was removed, and the child restored to perfect health.

Philadelphia, August 1st, 1805.

A Caſe of Diſeaſe produced by taking one Ounce of Corroſive Sublimate, ſucceſsfully treated. Communicated to the Editor, by Dr. Wm. Budd.

DECEMBER 11, 1799, I received a note requeſting my attendance on a young lady, about 12 o'clock, who was repreſented to be very ill. I haſted there, and found her walking about the room without much appearance of extreme danger: on converſing with her concerning the ſubject of her complaint, I found, that twenty-four hours previous to my being called, ſhe had been ſuddenly ſeized with violent pains in the ſtomach, which were directly followed by profuſe vomiting of blood, which ſymptoms ſtill continued at intervals: the abdomen was ſwelled as large as a woman's in her ſeventh month of pregnancy, was very hard, and ſhe had pains at regular intervals, ſimilar to pains in labour; ſhe complained of great thirſt, but was not able to retain what ſhe drank any length of time; pulſe rather more frequent than uſual, but not full: the above ſymptoms gave me reaſon to ſuſpect they were owing to ſome irregularity in the uſual periodical diſcharges, or perhaps ſhe might be pregnant, and the violent pains cauſed by that; I made further inquiry in hopes that ſhe would relate ſome circumſtance that would unfold the real cauſe of her diſeaſe, but all to no purpoſe, for ſhe declared ſhe had not taken any thing that could have produced that effect, and that ſhe had been regular but two weeks before, and experienced good health previouſly to that period. I directed about twelve ounces of blood to be taken from the arm as ſoon as it could be done conveniently, and gave her two grains of gum opii in pills, hoping that ſhe would be eaſed by them, but they were almoſt inſtantly thrown up. 12th. The ſwelling ſtill continued, attended with great pain in the ſtomach and bowels; very thirſty, and the bowels have not been freely opened ſince yeſterday; the bleeding of laſt night produced no relief, I directed the

ſame quantity to be taken again, and to give a table-ſpoonful of the ol. ricini every hour until the bowels ſhould be freely opened.

13th. The ſwelling of the abdomen has ſuddenly diſappeared during the laſt night, and the pain likewiſe abated, ſo that the patient got ſome reſt; but this morning the ſwelling returned with the uſual ſymptoms of pain, and great heat or burning of the ſtomach, and occaſional vomiting or belching of blood; for, as ſhe lay on her back, ſhe would raiſe conſiderable quantities of blood, mixed with water, by a peculiar action of the ſtomach, without any exertion on her part; the ſtomach has become ſo very irritable that ſhe could with difficulty bear to be touched with the hand, or even to ſuſtain the weight of the bedclothes. She now complains of ſoreneſs in the throat and fauces, which partly confirms me in what I frequently ſuſpected, that ſhe had taken ſome poiſonous medicine, and that is moſt likely to be a mercurial poiſon, from the affection of the mouth and throat.

I ordered the oil to be frequently repeated through the day, with a double view; 1. That it would be moſt likely to preſerve the ſtomach and bowels from injury, and from any corroſive matter that might be contained in them; and, 2. The good effects that would be derived from its purgative quality: I likewiſe directed about ten ounces of blood to be taken, and a large bliſter to be applied to the region of the ſtomach, as well as one to each wriſt, alſo her drinks to be of the moſt diluting kind, ſuch as flaxſeed tea, barley water, &c.

14th. I found her generally relieved from the pains in the ſtomach and bowels; the oil operated very well, and the bliſters drew conſiderably; ſhe ſays the pain is chiefly removed from the ſtomach, but has a pricking ſenſation, as ſhe deſcribes, like ſword points ſticking in it; troubled with fainting fits. This afternoon her pains returned with redoubled violence, and are attended with conſiderable fever; the affection of the head ſtill continues, as well as the diſcharge of

blood from the ſtomach. She now thought proper to inform me through the medium of a friend, that ſhe had taken on the day before I was called, twenty-five cents worth of merc. cor. ſub. which, from the general price of that medicine, muſt amount to an ounce or four hundred and eighty grains; her ſituation now appeared to be deſperate; indeed it is ſtrange, that inſtant death did not enſue from the enormous doſe of poiſon; the pricking pain, as above deſcribed, proceeded, as I ſuppoſe, from ſome of the ſublimate in its native ſtate in the ſtomach; I determined therefore to try the effects of a ſtrong ſolution of vegetable alkali, which would cauſe a ſpeedy decompoſition, and render the ſublimate inoffenſive;—the alkaline ſolution anſwered my expectation, for it produced inſtant relief, and remained longer in the ſtomach than any liquid ſhe had taken before.

15th. Continues better: ordered the ſolution and oil to be repeated.

16th. Swelling has increaſed very much ſince yeſterday: complains of great pain in the ſtomach and bowels, throat very ſore and has frequent fits, pulſe full and hard. Catamenia made their appearance during laſt night, and increaſe to an alarming degree; ordered her to be bled, and take ten grains of alum, with about an equal quantity of ſal nitri every two hours till ſhe ſhould get relief, and cold vinegar cloths to be applied to the pubes.

17th. Mœnorrhagia abated, ſtomach retains its medicine, but is ſtill very ſenſible to the touch; bowels freely opened, drinks flaxſeed tea, and is able to take a ſmall quantity of light nouriſhment; ordered ſmall quantities of ſweet oil at intervals through the day to be taken, and if the bowels ſhould not be freely opened, to have an injection.

18th. Continues to mend, and takes the oil two or three times a day.

20th. The abdomen frequently ſwells and becomes very hard, but diſappears by the operation of the medicine.

January 21, 1800. I was again ſent for to ſee my old patient, who is afflicted in the manner before deſcribed, with an additional ſwelling in the epigaſtric region of the left ſide, and a ſenſe of weight and hardneſs, which ſhe ſays ſhe has felt for ſeveral days; the ſtomach ſtill remains very irritable and frequently rejects what is taken in it. I reſumed my former mode of practice, which appeared to me to be the beſt and perhaps only means by which I could effect a cure.

22d. I found her relieved from moſt of her complaints, in conſequence, I ſuppoſe, of a copious diſcharge from the ſtomach, of matter, which reſembled pus, and which ſhe ſays had a ſaltiſh taſte: I directed her to take a moderate portion of nouriſhing diet, and to uſe oil, whenever the bowels required opening.

29th. She ſtill continues mending, and frequently vomits the aforementioned matter, which vomiting is preceded by a ſenſe of pain and weight in the ſtomach.

N. B. I heard from her ſome time after: ſhe was in good health, except ſome ſlight affection of the ſtomach, which perhaps may be increaſed by a ſtrong propenſity to eat Cayenne pepper ſince her illneſs.

Philadelphia, Auguſt 1, 1805.

Hiſtory of a Caſe of Death from long continued Abſtinence. Communicated to the Editor, by BENJAMIN RUSH, M. D.

Auguſt 23, 1805.

DEAR SIR,

THE following account of the uncommon duration of human life under extraordinary degrees of abſtinence, was communicated to me ſome years ago by Judge Fiſher of Virginia, by whom it was received from the brother of the unfortunate and probably deranged gentleman, who was the ſubject of it. The account may ſerve to enlarge the ideas of phyſicians of the reſources of the conſtitution to preſerve itſelf, by the aid of that which is the uſual cauſe of its deſtruction, I mean diſeaſe.

From your friend,

BENJAMIN RUSH.

DR. JOHN REDMAN COXE.

King George County, October 11, 1802.

MR. C— S— in the ſummer of the year 1794, aged about thirty-two years, while riding to the pariſh church to attend divine ſervice, was ſeized with hemiplegia, or as ſome of his phyſicians termed it, *arthritic vertigo*, which palſied him on one ſide, rendering his articulation indiſtinct, and his gait irregular and tottering. He did not fall, but being ſenſible of the change in his conſtitution, he rode up to the houſe of Mr. R— A— which was at hand—and at which he afterwards died. His diſpoſition, which was naturally cheerful, aſſumed a melancholy complexion. He was attended by ſeveral able

phyſicians, but finding at the end of a year that he had received no benefit from their preſcriptions, he formed a reſolution of terminating his life by abſtinence from nouriſhment. On the part of his friends, nothing was omitted to divert him from this deſperate purpoſe; but every endeavour proved ineffectual. When other arguments failed, he was tempted, by bringing into his preſence ſuch diſhes as he was known to be fond of. On theſe occaſions he would ſhut his eyes, and impatiently deſire the diſhes to be taken away, confeſſing that the temptation greatly diſtreſſed him; for it is to be obſerved, that his appetite had not been impaired by the diſeaſe.

Finding himſelf at firſt tormented by exceſſive thirſt, cauſed by a fever which ſupervened in conſequence of his abſtinence from food, he chewed now and then an apple, carefully ſpitting away the pulp; but conceiving that even this practice might protract his life, he rejected, after a day or two, the relief it afforded, indulging himſelf in water alone. In this manner tormented, by alternate paroxyſms of hunger and thirſt, he lived SIXTY DAYS at leaſt, and retained apparently his uſual underſtanding.

Sir,

Your reſpectful and obedient ſervant,

JOHN A. STUART.

ST. GEORGE TUCKER, ESQ.

This extraordinary caſe is not altogether unprecedented. In the 18th vol. of the European Magazine for 1790, p. 124, we have the following account in a paper entitled "Memoirs of a celebrated French Adventurer."—*Editor.*

"In 1782, he was ſtill in the Baſtile. He took a loathing to all food, and loſt even the neceſſity of eating. He had al-

ready continued nine days without ſuſtenance. His negro had in vain certified this extraordinary fact. To aſcertain the truth it was reſolved, that he ſhould eat his meals out of the Tower, and be carefully watched to ſee whether he carried any proviſion to his maſter. The fact was verified. Mr de Saint Sauveur, at that time Lieutenant of the Baſtile, and Mr. Chenon, Commiſſary, who frequently ſaw him in this ſituation, certify, that the Chevalier de Saint Lubin, abſtained from every kind of meat and drink for the ſpace of *fifty-eight* days." He afterwards eſcaped from the Baſtile.

In the ſame Magazine for October 1783, are accounts of animals living for many, even twenty-five days without eating, when Calabria was deſtroyed by an earthquake: alſo an account of "a girl of eighteen years, buried under the ruins of a houſe ſix days, having at the ancle, had her foot almoſt cut off, by the edge of a barrel that fell upon it; the duſt and mortar ſtopped the blood; ſhe never had the aſſiſtance of a ſurgeon; but the foot of itſelf dropped off, and the wound perfectly healed without any other aſſiſtance but that of nature." Theſe are related to Sir William Hamilton, by the Padre Minaſi.

Hiſtory of a Caſe of Conſtipation continued: alſo an Account of a Caſe of Biliary Concretions. By DR. JOHN VAUGHAN, *Wilmington.*

Auguſt 7th, 1805.

DEAR SIR,

THE caſe of conſtipation mentioned in the 1ſt vol. of the Medical Muſeum, page 397, has ſince terminated fatally in deſpite of every means we could employ to reſiſt it. The olive oil relieved the patient twice, and he then became diſguſted with it and refuſed to take it again. We then reſorted to more active purgatives, with our former want of ſucceſs; they diſtreſſed him exceſſively, producing tormina and vomiting. Injections entirely failed; and finding a caſe of conſtipation in Duncan's Commentaries, which was relieved by the uſe of a garden pump, I procured a hand pump, with a flexible or hoſe tube adapted to it, and threw up warm water into the inteſtines as long as the di tention could be borne. This proceſs gave temporary relief for a fortnight and failed alſo.

The patient wearied, at length, with the fruitleſs efforts to reſtore him, reſigned himſelf to his fate, with the occaſional uſe of laudanum to mitigate his ſufferings. He lay, for the almoſt incredible term of *forty-eight days*, without the leaſt diſcharge per anum, and friendly death put a period to his ſufferings on the twenty-eighth of June.

I was extremely anxious to have examined the body, by diſſection, but was unfortunately detained out of town, at the time, by an imperious caſe, until putrefaction had taken place. There can be little doubt, but diſſection would have afforded ſome light in this ambiguous and perplexing diſorder;—but it was impracticable.

From the effects of the ſmall pump, in this caſe, I am perſuaded that it is much more powerful, and ſhould be preferred to the ſyringe, in all caſes of difficulty. It alſo is infinitely

more convenient. With a hoſe tube of from two to three feet in length, a patient may lie in bed; without being expoſed to indelicacy, and with but very little inconvenience.

CASE OF BILIARY CONCRETIONS.

In a caſe of bilious colic, which occurred lately in the perſon of an elderly lady, who has been many years afflicted with colic, and almoſt continual uneaſineſs in the region of the abdomen; during the operation of an active cathartic, ſhe voided about thirty calculous concretions. The largeſt weighed ſix grains. They were about the ſize of grains of maize—angular, had a whitiſh-coloured nucleus encruſted with a darker lamina, which was ſuſceptible of a fine poliſh and reſembled the enamel of teeth. They were inſoluble in water, in acids or in alkalies, but when applied to a candle burnt with a lambent flame, ſimilar to elaſtic gum; and a conſiderable quantity of air was diſengaged during combuſtion. They poſſeſſed no one quality of calcareous earth, or urinary calculi; and I have no doubt were formed in the gall bladder or its ducts, and diſcharged into the inteſtines, by a ſympathetic action, excited by the operation of the cathartic. The lady has completely recovered, and with ſome reaſon to hope for better health, than while thoſe concretions were lodged in the viſcera, obſtructing or impeding the ordinary function of whatever viſcus they may have been ſeated in.

I am, Sir, reſpectfully,
Your friend and humble ſervant,
JOHN VAUGHAN.

Dr. John Redman Coxe.

To the Editor of the Philadelphia Medical Museum.

SIR,

IF the following case of puerperal convulsions comports with the plan of your Museum, you will oblige me by inserting it.

I am, Sir,
Your friend and well-wisher,

A. B.

Philadelphia,
June 5th, 1805.

Puerperal Convulsions.

July 28th, 1799. I was requested to visit Mrs. D. aged about forty, of a full habit, labouring under puerperal convulsions. About 9, A. M. yesterday, the waters came away, and every thing went on well, though rather tedious. At 9, P. M. she was safely delivered of twins, which were small, but healthy. The placenta came away soon after, with the loss of but little blood. Her spirits were raised at the happy termination of the labour, in consequence of which she exerted herself greatly in talking with her neighbours; and got out of bed not less than three or four times during the night, to discharge her urine, which came away in large quantity. The gentleman who attended her, told me he left her last evening in the most favourable state. This morning, about 9 o'clock, having slept but little, and being very restless during the night, with a slight discharge of the lochiæ, she was seized with a convulsion. Another succeeded in half an hour, and by the time I saw her at 1, P. M. she had had no less than seven. She was now insensible, very restless, and frequently sighing, skin hot, pulse quick and strong, face much flushed. Her pulse

this morning was very low, and she had taken assafœtida, vol. alkali, and opium, without relief. Her bowels were well opened yesterday. I ordered her to lose ten ounces of blood, which were taken away whilst I remained, with difficulty, owing to the convulsions. She bled freely, and for a short time seemed rather easier. In about ten minutes she had a fit, continuing ten or fifteen minutes, and terminating in an apoplectic stertor, with foaming at the mouth. During the fit the pulse was full and strong. I ordered an emollient glyster, with warm fomentations to the abdomen; and left directions to take away ten ounces more of blood, if the pulse kept up, and the convulsions did not moderate.

At 6, P. M. I found her more quiet, and sleeping easier; has had four more fits, at longer intervals; and at times she appeared to be sensible, by calling for her children, and by knowing her attendants; the skin is cooler, and is more generally moist; slight appearance of the lochiæ. The pulse kept up so much, that she lost the blood as I had directed between 3 and 4, P. M; pulse still strong and quick, above 140 in a minute. The injection was retained. If the symptoms do not moderate, let her lose 12 ounces of blood in the course of the evening, and apply a large pair of blisters to the ankles. The face is less flushed, and the head appears relieved, as she has less of the stertorous breathing, and less general inquietude. The blood drawn was not sizy. I am told she is rather intemperate in health.

29th, 9, A. M. Four fits, but less violent during the night; she is more sensible, though restless; blisters rose well; lost ten ounces of blood in the evening, which is not sizy; no appearance of lochiæ; sleeps more easy. During the night her bed broke down, and she was obliged to sit up in a chair till it was mended. Passed her water several times, but has had no stool; considerable pain of abdomen, but no sickness or vomiting; breasts rather turgid; pulse still active and strong, and 130 in a minute; tongue white and much bitten during the convulsions; change her linen, &c. daily; continue fomenta-

tions to the abdomen; bleed to ten ounces if the pulse keeps up, and let her drink punch made of cremor tartar. If her bowels are not soon open give moderate doses of soluble tartar or Glauber's salts.

8, P. M. I found her in a composed and sound sleep, pulse 116, and more moderate; skin cooler and less flushed; one copious stool, with great relief. At 3, P. M. the pulse had risen so greatly that ten ounces of blood (not sizy) were taken away. Breasts considerably hard. Apply the children to them. Omit the cream of tartar, as she has taken about two table spoonfuls. Barley water or molasses and water for her common drink, with ℥ij. of nitre to each quart. Has had no convulsions. Slight appearance of the lochial discharge. Appears more sensible than heretofore. Before the last bleeding she complained of very great sensibility of the skin; even tying up the arm to bleed gave considerable pain. This has subsided. Repeat the bleeding if the pulse rises.

30th. Bowels well opened during the night. Since when, she has been much disposed to hysteria, laughing and talking continually, except whilst sleeping, which is tolerably composed. No convulsions. Breasts more turgid. Apply the children to them. Lochiæ increase. Complains of pain in her side and back. Bathe the parts with volatile liniment. No pain of abdomen. Urine natural. Pulse from 112 to 120, and more moderate. Bleeding not requisite in the night. Tongue white and moist, and much injured by biting it during the convulsions. Ordered nitre grs. x, and one-eighth of a grain of tartar emetic every two hours; and if the pain of the side increases apply a blister, and bleed to six or eight ounces.

31st. Appears much better. Lochiæ in small quantities. Pain of side relieved by the embrocation. Two stools last night and one this morning with much relief. Pulse nearly 130, but moderate. Tongue white and moist. Talked a great deal yesterday and saw too many friends. Pain of abdomen is gone. Slept but little till the morning. Continue

the nitre and tartar emetic and uſe gruel without wine, for nouriſhment.

Auguſt 1ſt. Slept well by the aid of ten drops of laudanum. Much better. Milk increaſes, and lochiæ in uſual quantities. Pulſe 100 and moderate. Tongue cleaner. Sat up yeſterday in the afternoon. Urine frequent. Complains of her bruiſes. Continue nitre, &c. and take broth.

3d. Convaleſcent. In leſs than a week from this period ſhe was down ſtairs.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

Humane Society of Philadelphia.

Directions, for recovering perſons who are ſuppoſed to be dead, from drowning; alſo, for preventing and curing the diſorders produced by drinking cold liquors, and by the action of noxious vapours, lightning, and exceſſive heat and cold upon the human body. Publiſhed by the Humane Society of Philadelphia. 1805.

Directions, for recovering Perſons who are ſuppoſed to be dead, from Drowning.

1. As ſoon as the body is taken out of the water, it muſt be conveyed on a board or bier if at hand, to a houſe, or any other place, where it can be laid dry and warm, avoiding the uſual deſtructive methods *of hanging it by the heels, rolling it on a barrel*, or *placing it acroſs a log on the belly.*

2. The clothes muſt be immediately ſtripped off, and the body wrapped up in blankets, well warmed. It ſhould be laid on its back, with the head a little raiſed. If the weather be cold, it ſhould be placed near a fire, and an heated warming-pan ſhould be paſſed over the body; but in warm weather it will be ſufficient to place it between two blankets well heated, or in the ſunſhine, taking care to prevent the room from being crowded, with any perſons who are not neceſſarily employed about the body.

3. At the ſame time, the whole body ſhould be rubbed with the hand, or with hot woollen cloths. The rubbing ſhould be moderate, but continued with induſtry, and particularly about the breaſt. Apply alſo heated bricks to the feet, belly, and breaſt. The immediate application of frictions is of the utmoſt importance, as many have been recovered by frictions only, when early uſed.

4. As ſoon as it can poſſibly be done, a bellows ſhould be applied to one noſtril, whilſt the other noſtril and the mouth are kept cloſed, and the lower end of the prominent part of the wind-pipe (or that part which is called by the anatomiſts, *pomum adami*) is preſſed backward. The bellows is to be worked in this ſituation; and when the breaſt is ſwelled by it, the bellows ſhould ſtop, and an aſſiſtant ſhould preſs the belly upwards, to force the air out. The bellows ſhould then be applied as before, and the belly again be preſſed; this proceſs ſhould be repeated from twenty to thirty times in a minute, ſo as to imitate natural breathing as nearly as poſſible. Some volatile ſpirits, heated, may be held under the valve of the bellows whilſt it works. If a bellows cannot be procured, ſome perſon ſhould blow into one of the noſtrils, through a pipe or quill, whilſt the other noſtril and mouth are cloſed as before; or if a pipe or quill be not at hand, he ſhould blow into the mouth, whilſt both noſtrils are cloſed; but whenever a bellows can be procured, it is to be preferred, as air forced in by this means, will be much more ſerviceable than air which has already been breathed.

5. During this time, a large quantity of aſhes, water, ſalt, or ſand, ſhould be heated; and as ſoon as it is milk-warm, the body muſt be placed in it; the blowing and rubbing are then to be continued as before; and when the water, aſhes or ſalt are cooled, ſome warmer muſt be added, ſo that the whole may be kept milk-warm.

Loud noiſes have ſometimes proved ſucceſsful in recovering ſuch perſons and reſtoring to life. When ſigns of returning

life are apparent, the friction muſt be continued, but more gently.

Theſe methods muſt be continued three or four hours, as in ſeveral inſtances they have proved ſucceſsful, although no ſigns of life appeared until that time. When the patient is able to ſwallow, he muſt take ſome wine, brandy, or rum and water; bleeding or purging ought not to be uſed, without conſulting a phyſician, who ſhould be called in as ſoon as poſſible—but glyſters of ſalt and water may be injected.

After life has returned, if convulſions come on, blood ſhould be taken by direction of a phyſician.

To prevent the fatal Effects of drinking cold Water, or cold Liquors of any Kind in warm Weather.

1ſt. Avoid drinking whilſt you are warm, or,

2d. Drink only a ſmall quantity at once, and let it remain a ſhort time in your mouth before you ſwallow it; or,

3d. Waſh your hands and face, and rinſe your mouth with cold water before you drink. If theſe precautions have been neglected, and the diſorder incident to drinking cold water hath been produced, the firſt, and in moſt inſtances, the only remedy to be adminiſtered, is ſixty drops of liquid laudanum in ſpirit and water, or warm drink of any kind.

If this ſhould fail of giving relief, the ſame quantity may be given twenty minutes afterwards.

When laudanum cannot be obtained, rum and water, or warm water ſhould be given. Vomits and bleeding ſhould not be uſed without conſulting a phyſician.

The dangerous Effects of noxious Vapours, from Wells, Cellars, fermenting Liquors, &c. may be prevented,

By procuring a free circulation of air, either by ventilators or opening the doors or windows, where it is confined, or

by changing the air, by keeping fires in the infected place, or by throwing in ſtone-lime recently powdered.

Theſe precautions ſhould be taken, before entering into ſuch ſuſpected places; or a lighted candle ſhould be firſt introduced, which will go out if the air is bad. When a perſon is let down into a well, he ſhould be carefully watched, and drawn up again on the leaſt change. But when a perſon is apparently dead, from the above-mentioned cauſe, the firſt thing to be done is to remove the body to a cool place in a wholeſome air; then let the body be ſtripped, and let cold water be thrown from buckets over it for ſome time. This is particularly uſeful in caſes of apparent death from drunkenneſs.—Let the treatment now be the ſame as that for drowned perſons. The head ſhould be raiſed a little; and continued frictions, with blowing into the noſtril with a bellows, ſhould be practiſed for ſeveral hours.

In Caſes of Suffocation from the Fumes of Burning Charcoal,

The general treatment recommended for curing the diſorders brought on by noxious vapours, is to be applied; but the dangerous effects of this may be prevented, by taking care not to ſit near it when burning; to burn it in a chimney; and where there is no chimney, to keep the door open, and to place a large tub of water in the room.

In all theſe, as well as in caſes of drowned perſons, moderate purges and bleeding are only to be uſed, with the advice of a phyſician.

To prevent the fatal Effects of Lightning.

Let your houſe be provided with an iron conductor; but when this cannot be had, avoid ſitting, or ſtanding, near the window, door, or walls of an houſe, during the time of a thun-

der guſt. The nearer you are placed to the middle of a room, the better. When you are not in a houſe, avoid flying to the cover of the woods, or of a ſolitary tree for ſafety.

When a perſon is ſtruck by lightning, ſtrip the body and throw buckets full of cold water over it for ten or fifteen minutes; let continued frictions and inflations of the lungs be alſo practiſed: Let gentle ſhocks of electricity be made to paſs through the cheſt, when a ſkilful perſon can be procured to apply it; and apply bliſters to the breaſt.

To prevent Danger from Expoſure to the exceſſive Heat of the Sun.

Diſorders from this cauſe, or (as they are commonly termed) *ſtrokes of the ſun*, may be expected, when a perſon who is expoſed to his rays, is affected with a violent head-ache, attended with throbbing or with giddineſs; where the diſorder takes place, theſe ſymptoms are followed by faintineſs and great inſenſibility, with violent heat and dryneſs of the ſkin, redneſs and dryneſs of the eyes, difficulty of breathing, and, according as the diſeaſe is more or leſs violent, with a difficulty, or entire inability of ſpeaking or moving.

To guard againſt theſe dangerous effects of heat, it will be proper,

1ſt. To avoid labour, or violent exerciſe, or expoſing yourſelf to the rays of the ſun, immediately after eating a hearty meal:

2d. To avoid drinking ſpirits of any kind, when you are thus expoſed. Theſe add an internal fire to the heat of the ſun. Vinegar and water, ſweetened with molaſſes or brown ſugar, butter-milk and water, ſmall beer, whey, or milk and water, are the moſt proper drinks for people who are expoſed to exceſſive heat. But the leſs a perſon drinks of liquors of any kind *in the forenoon*, the better will he endure the heat of a warm day.

3d. To wear a white hat, or to cover a black one with white paper, when you are neceſſarily expoſed to the hot ſun, and to avoid ſtanding ſtill when in ſuch a ſituation.

4th. To retire into the ſhade as ſoon as you begin to be affected with pain or throbbing in the head, with giddineſs or with faintineſs.

If theſe precautions have been neglected, and the ſymptoms above deſcribed have come on, it will be proper,

1ſt, To remove the perſon ſo affected into a cool, dry place, and to looſen all his garments, particularly thoſe around his neck and breaſt.

2d. To examine whether the pulſe at the wriſts or temples beats forcibly, and if it does, to bleed immediately; but if the pulſe be weak, or cannot be perceived, bleeding muſt not be performed.

3d. To place his feet and legs (or if it can be done) the lower half of his body in warm water. But if this remedy fails,

4th. To apply linen cloths wet with cold water, or with cold water and vinegar, to the temples and all over the head.

5th. To adminiſter plentiful draughts of vinegar and water ſweetened.

In all caſes of this kind, a phyſician ſhould be ſent for, unleſs the patient recovers ſpeedily.

To prevent the Effects of exceſſive Cold.

Perſons are in danger of being deſtroyed by it, when they become very drowſy, or are affected with general numbneſs or inſenſibility of the body. As the cold which proves fatal, generally affects the feet firſt, great care ſhould be taken to keep them as warm as poſſible.

1ſt. By protecting them when you are expoſed to cold with wool, or woollen ſocks within the ſhoes or boots, or

with large woollen ſtockings drawn over them, or when you ride, with hay or ſtraw wrapped round them.

2d. By keeping up a briſk circulation in the blood veſſels of the feet, which will be beſt preſerved by avoiding tight boots or ſhoes, by *moving the feet conſtantly;* or when this is impracticable, from a confined ſituation, and two or more perſons are expoſed together,

3d. By placing their feet, *without ſhoes*, againſt each other's breaſts.

If notwithſtanding theſe precautions, a perſon ſhould be rendered ſleepy or inſenſible by cold, he muſt exert himſelf and move about quickly, for if he ſhould ſleep in the cold, he will inevitably periſh. When a perſon who is travelling in company, begins to be affected in this manner, his companions ſhould force him to walk briſkly or to run.

When cold has produced apparent death, the body ſhould be placed in a room without fire, and rubbed ſteadily with ſnow, or cloths wet with cold water, at the ſame time that the bellows is applied to the noſe, and uſed as in the caſe of drowning. This treatment ſhould be continued a long time, although no ſigns of life appear; for ſome perſons have recovered, who were to appearance lifeleſs for ſeveral hours.

When the limbs only are affected by the cold, they ſhould be rubbed gently with ſnow, or bathed in cold water with ice in it, until their feeling and power of motion returns; after which, the bathing or rubbing with ſnow is to be repeated once every hour, and continued a longer or ſhorter time, as the pains are more or leſs violent.

The perſon thus affected ſhould be kept from the fire, for warmth and acrid application of every kind are very injurious.

Extract from the Minutes of the Original Vaccine Pock Institution, in Broad Street, Golden Square.

TUESDAY, *Jan.* 29, agreeably to the notice in the summons, a critical examination of Mr. Goldson's second pamphlet was read by Dr. Pearson.

Mr. G. at the outset asserts, that his former conclusion has been confirmed by additional subsequent instances, that the inoculated cow-pock is only a temporary preservative; and hence that a person at one time secure, may become susceptible of small-pox. However they differ in opinion, the author candidly acknowledges the liberal and just conduct of the medical establishment of this institution, of Dr. Rollo, and Mr. Dunning; and "I trust," says he, "that the physicians of the institution will conceive that I feel the marked attention they have paid me. Their sentiments are replete with real and genuine philanthropy, conveyed in such language as to demand not only from the profession, but from the public, a large tribute of applause." But there are other authors, says he, "who have thought proper to substitute abuse for investigation: to record their names would disgrace my pen, and to combat them I find myself unequal."

On the stricture of Dr. Jenner, "that the practice of vaccination had been always ill conducted at Portsmouth, owing to imperfection of virus from beginning to end," Mr. G. remarks, "that the assertion is without foundation in authority; for there was, in all his cases, a vaccine vesicle leaving a scar; nor was there any disease of the skin to alter the progress of it."

Dr. de Carro also having cast a reflection on Mr. G. the compliment is returned, by advising the foreigner, without delay, not to confide in his cases of inoculation with matter of grease;—"which he has with so much ardor dispersed

through the Auſtrian dominions, leſt, at no great diſtance of time, miſchief overtake the ſubjects and the inoculator."

Mr. G. next comes to a detail of caſes formerly publiſhed, with obſervations.

1ſt. Mr. Grant's child affords a caſe of ſmall-pox after vaccination. The patient having been inoculated by a confidential friend of Dr. Jenner, neither the inoculator's qualifications, nor the efficacy of the matter, are doubted, as in ſimilar caſes of failure when the matter was from other ſources, and the inoculator not of the party. Accordingly, the ground of objection is, that the eruptive diſorder, on the ſecond inoculation, was not the ſmall-pox; but Mr. G. maintains, that the courſe and ſymptoms were ſuch as would have been deemed the ſmall-pox, if publiſhed before the cow-pock inoculation. Dr. P. remarks, that there certainly were not ſuch ſymptoms and progreſs as he ſhould conſider to be deciſively the ſmall-pox: for,

'1. The inflammation was more rapid than uſual, and almoſt diſappeared before the fever and eruption.

'2. The ſix or ſeven eruptions which came out on the 8th day died away in the ſtate of a watery ſcurf, without attaining the ſtate of puſtule, or even of veſicle: and he ſays, he ſhould have not confided in ſuch a caſe being the ſmall-pox before vaccine inoculation; although he acknowledges that equally irregular and anomalous caſes of ſmall-pox have occurred, and given ſecurity againſt future attacks.

'3. There ſhould, at leaſt, have been a ſuppurated pock or puſtule ſubſiſting in that ſtate for not leſs than five or ſix days, and then affording a ſcab which left a cicatrix. The hard black ſcab remaining for a month, and leaving an indentation, is what he has frequently ſeen from variolous inoculation ſubſequent to vaccine, and in which caſes there were no eruptions nor conſtitutional diſorder.

'Mr. G. ſeems to infer, that the ſuſceptibility of taking the ſmall-pox is not deſtroyed by vaccination, becauſe, on re-inoculation with variolous matter, there was excited in all his

cases, at least a local inflammation; which effects not very unusually secure a patient from the small-pox, although there has been no constitutional disorder. But in eighty-four out of one-hundred and two cases at Paris, as cited by Mr. G. no sensible local effects were produced on variolous inoculation after the vaccine. Dr. P. says, he cannot admit these cases as the smallest evidence adverse to vaccination.

'1. Because, so far from such local effects not being unusually attended or followed by unsusceptibility of the small-pox, he affirms that such unsusceptibility is not effected with such appearances in one case out of five hundred; whereas, in Mr. G's practice, the greater part of his cases, which he considers as small-pox after cow-pock, were merely these local affections excited by the variolous inoculation.

'2. Dr. P. observes, that after small-pox, on a second variolous inoculation, very often similar local affections do occur.

'3. He has seen similar local affections repeatedly, and as frequently on a second inoculation after variolous as after vaccine pock.

'Mr. G. supports his opinion by adducing five cases from Dr. Rollo; in three of which there were pustules in the areola, and a constitutional affection; and in the other two there were eruptions which did not maturate, although the fluid in them excited the distinct small-pox in other persons, who had not gone through either small-pox or cow-pock —There is no reason to doubt the accuracy of Dr. Rollo's cases; but Dr. P. for reasons above given, cannot admit them as evidence of small-pox after cow-pock, and because the variolous matter of local affections, in persons who have gone through either small-pox or cow-pock, will frequently excite distinct small-pox as here related. Mr. G. next calls in the evidence of five cases of variolous inoculation after cow-pock, by Mr. Crockford: but here two of them had only local effects produced, and, in the rest, merely a few pimples broke out.

'Mr. G's. second case, as related in his first publication, is that of Worsfold's child, supposed to have had the small-pox in the natural way, who had the cow-pock three years and two months before. Dr. P. agrees with Mr. G. that his opponents had no right to declaim that the child had not really gone through the cow-pock, considering Mr. G's accurate account of the progress, and of the eschar remaining; but that the small-pox really took place, Dr. P. does not allow; for the seven eruptions which appeared were merely pimples that remained only five days, and never maturated.

'In a 3d, which was "Callard's case" of small-pox in the natural way, Dr. P. observes, there was sufficient evidence of the cow-pock preceding; but how far twenty small eruptions, which disappeared without suppuration in six or seven days, will be admitted as small-pox, seems doubtful, especially as they had not the usual aspect even of variolous vesicles. Dr. P. however, thinks that Mr. G's adversaries have not combated him successfully, by alleging that the child contracted a local small-pox from sleeping with another child ill of that disease.

'In a 4th case, Mr. Warner's child, there seems no reasonable doubt that it had gone through the vaccina; but that the fever and twenty-five eruptions, two years afterwards, were small-pox, he hesitates to admit, as they never suppurated, but exuded a small quantity of lymph, and on the 7th day scabbed.

'In a 5th case, "Luscomb's daughter," there were the usual decisive characters and course of the vaccina in the first instance; and three years afterwards there came on a fever, with an eruption on the 4th day, which became pustules; and the matter of them produced the small-pox in others. Dr. P. says, that there is no reasonable doubt of this being a case of small-pox after cock-pock, unless the scabbing in seven days should be considered as an objection: but Mr. G. having added, that the vaccine inoculation was followed by the usual scar, he is of opinion that the case ought to be admitted as

one of cow-pock succeeded by small-pox, although, as Mr. G. observes, it has been treated with levity; and he acutely remarks, that so distinct a case of cow-pock would have been courted as evidence in the House of Commons, however much it has been scouted. But, as Terence says, "Melius, pejus, profit, obfit, nil vident nisi quod lubent." This is the first admissible evidence that Dr. P. can allow in Mr. G's statement; and it was allowed in the statement lately published by his colleagues and himself.

'Mr. G. next calls in evidences from Dr. Rollo's pamphlet, observing, that the thirteen persons re-inoculated with variolous matter after cow-pock, all shewed symptoms, more or less, of susceptibility. Dr. P. can find no support from the publication of Dr. R. in favour of Mr. G's opinion; because Dr. R. explicitly says, the small-pox has not decidedly existed in any one instance. His words are, "The disease excited has been extremely mild, and some doubt may remain whether it was really constitutional affection:" and he adds, which is much against Mr. G. "It is also to be recollected, that many of the remaining five hundred and thirty-seven cases of cow-pock have been occasionally exposed to variolous infection without effect."

'The author now under criticism advances to attack the statement lately published by Dr. P. and his colleagues at this Institution.—Prefacing his attack, however, in his usual gentlemanly mode: "I was disappointed," says he, "when I found their experiments consisted solely of repeated inoculations; and I cannot help expressing my surprise that they should have resorted to them exclusively. "Inoculation," says he, "is not the truest or the strongest test; yet the interests of society required, and the spirit of investigation demanded, the most decided mode of setting the question at rest. The first action of inoculated small-pox is on the skin. If vaccination, therefore, should consist in inducing a peculiar affection of it (and which the assimilation of the variolous to the vaccine pock in all the experiments seems to indicate,) it can

be no juſt criterion; becauſe, like moſt other affections ſimply local, it might be diminiſhed, or totally removed, by time, or any other impoſed morbid action. They muſt acknowledge the wide difference there is between inoculation and caſual infection. If thoſe who were ſubmitted to both vaccine and variolous teſts at the ſame time, had been kept for ſome days in a free communication with perſons labouring under ſmall-pox, then the inveſtigation would have been moſt complete, and my wiſhes complied with; that of inoculating ſome, and expoſing others to infection. After what had been experienced at the ſmall-pox hoſpital early in the practice, that cow-pock modified ſmall-pox when the two inoculations were combined, it is almoſt inconceivable why ſuch experiments were made."—Dr. P. ſays he was utterly aſtoniſhed by theſe remarks; for he thought the medical eſtabliſhment had ſelected all the circumſtances moſt favourable for producing the ſmall-pox: but they are now told, that repeated inoculations are not the trueſt or ſtrongeſt teſts, and that they were required to employ the moſt decided mode of determining the queſtion. And Mr. G. acquaints us that inoculation is inadequate, becauſe the firſt action of the inoculated ſmall-pox is on the ſkin; and if vaccination ſhould conſiſt in inducing a peculiar affection of it, no juſt criterion can thereby be afforded; becauſe, like moſt other local affections, it might be diminiſhed, or totally removed, by time, or any other morbid action.—So, then, ſays Dr. P. Mr. G. is pleaſed to ſet aſide facts from experience, and to ſubſtitute reaſoning, even hypothetical reaſoning; for it is a fact derived from immenſe experience, that a perſon having had the ſmall-pox by inoculation, according to certain well known phenomena, is incapable of again taking the ſmall-pox, either by inoculation or in the natural way.

'Now Mr. G. does not aſſert, from facts of experience, that a perſon can again take the ſmall-pox after the inoculated ſmall-pox; but he ſays, "the not taking ſmall-pox by inoculation after inoculated ſmall-pox can be no juſt criterion; becauſe, like moſt other affections ſimply local, it might be

diminiſhed, or totally removed, by time, or any other impoſed morbid action." This is, ſays Dr. P. an hypotheſis at variance with experience, which teaches us, contrary to the hypotheſis, that the inoculated ſmall-pox is not merely a local affection of the ſkin, but alſo an affection of the conſtitution; at leaſt it is ſuch an affection, that neither by effluvia nor by inoculation can the ſmall-pox be excited a ſecond time. Suppoſing Mr. G's ſtatement true of the ſmall-pox, then, from analogy, if vaccination only induced a peculiar affection in the ſkin, it alſo can be no juſt criterion.

'Mr. G. next tells us what he conſiders to be the true and ſtrongeſt teſt; viz. ſubmitting thoſe under the vaccine and variolous teſt at the ſame time, for ſeveral days, to a free communication with perſons labouring under ſmall-pox; thus inoculating ſome, and expoſing others to infection.

'Dr. P. remarks, that he does not diſallow that expoſure of perſons to the effluvia of the ſmall-pox, after either vaccine or variolous inoculation, is an additional teſt; but he does not allow "that it is a ſtronger or truer teſt than a ſecond inoculation;" for if it has been ſhewn that people have taken the ſmall-pox naturally who could not be affected by inoculation, it has alſo been ſhewn that perſons have been repeatedly expoſed to variolous effluvia without taking the ſmall-pox, but who finally took it by inoculation. But Mr. G. omits to notice, no doubt unintentionally, that his wiſhes have been in a great meaſure complied with in the late experiments by the Vaccine Pock Inſtitution; for many of the patients, as related in their ſtatement, were inoculated in the Small-pox Hoſpital wards, where they remained at leaſt half an hour, ſitting on their beds, ſhaking hands, expoſed to their breath, and otherwiſe coming in contact with the patients. That above ſixty patients were re-inoculated; with quite recent matter, with three, four, or five times the uſual number of punctures, yet the ſmall-pox could not be excited in one of them. We appeal to the public whether ſuch circumſtances were not as favourable for producing the ſmall-pox as can be conceived, and ſuch as have

never before been instituted. Mr. G's insisting that the patients should have been exposed for some days to variolous effluvia, is a demand, which, we trust, is unreasonable and unnecessary.

'Mr. C. however, has neglected to state evidence of another sort, which is, in fact, what he calls the truest and strongest test, viz. exposure to variolous effluvia: for, if he will have the goodness to turn over the pages of our statement of evidence, lately published, he will find, that, in inquiring for patients to be submitted to re-inoculation, two hundred and fifty families, at the fewest, were asked for that purpose, who had been vaccinated; but they refused to be again inoculated, alleging that they had been exposed so often to the natural small-pox, that they must have taken it if they had not been rendered unsusceptible by the cow-pock; and yet many of these families had been vaccinated at an earlier period than any of Mr. G's adverse cases. He has also overlooked the testimonies of the practitioners at Walton, Weybridge, and other neighbouring places, that not one of the patients vaccinated chiefly under Dr. P. and Mr. Keate, as early as 1799, had subsequently taken the natural small-pox. However Mr. G. may estimate the investigation published in their statement by this institution, it has by others been asserted to be *evidence little inferior to mathematical demonstration, and pronounced to be a specimen of medical logic.*

'Mr. G. bestows some strictures upon the procedure in our late trials of inoculating the same patient in different places, at the same time with variolous as well as with vaccine matter, and appears to be totally unacquainted with our design. The object and conclusion of these experiments are explained at p. 66 of our statement. "These experiments strikingly manifest that the same person is equally incapable of taking the cow-pock a second time as the small-pox, as hath been proved five years ago by Dr. P. and been subsequently confirmed; and it has been elsewhere shewn by him, that a person cannot take the cow-pock subsequently to the small-pox." The fact,

that a perſon cannot take the cow-pock a ſecond time, is the moſt important one diſcovered ſince the promulgation of vaccine inoculation itſelf in the year 1798. It has been repeatedly determined by Dr. P. in ſo many ways, that he feels as much confidence in the aſſertion that a perſon cannot have the cow-pock more than once, as that a perſon cannot have the ſmall-pox more than once. The fact is aſſerted in the ſeveral memoirs read at this Inſtitution, and the experiments have been made publicly, both at this Inſtitution, and before Dr. P.'s pupils, in the two preceding ſummer courſes. On this fact, with the confidence poſſeſſed from ſuch extenſive experience, Dr. P. *propoſes re-inoculation with vaccine matter, as a teſt for determining the ſtate of ſecurity againſt the ſmall-pox, in preference to variolous inoculation*, from the advantages ſet forth in his memoir at the laſt quarterly court. Now what, ſays Dr. P. does Mr. G. oppoſe to the extenſive experience, which he preſumes he has a right to ſtate without any juſt imputation of vanity? Why, truly, the obſervations of caſual vaccine inoculation, in two inſtances taken from Dr. Jenner's work, publiſhed in 1798, at a time when the characteriſtic properties of the cow-pock were not known, and of which caſes of caſual inoculation, if thouſands were cited, they would only prove that an affection in the part inoculated may be repeatedly excited in the ſame perſon by vaccine matter; but this local affection has not been ſhewn to be the real cow-pock, except in the firſt inſtance; and the ſame local affection may be repeatedly excited in certain perſons by inoculation, purpoſely, with vaccine matter, but eſpecially when applied to cuts and ſores of the chopped hands of the country people.

'This local affection (not vaccina) is frequently excited on the breaſts and cheeks of nurſes who have already gone through the ſmall-pox, by handling children in the cow-pock or ſmall-pox. To illuſtrate this ſubject: Suppoſe a cow to have the ſmall-pox on her udder, inſtead of the cow-pock; would any one doubt that milkers, with chopped hands or cuts, would not again and again contract a local affection?

Dr. P. humbly preſumes, then, that Mr. G. ought not to oppoſe his experience by ſuch meagre evidence, or until he can bring forward a great number of diſtinctly related and fully characteriſed caſes of cow-pock by inoculation ſubſequently to cow-pock or ſmall-pox. But, ſays Dr. P. full as my evidence is, and indeed more than neceſſary already, I beg to propoſe to Mr. G. or any other reſpectable adverſary, to riſque, if deſired, any ſtake on the iſſue of farther experiments of re-inoculation at this Inſtitution, that the reſult may be laid before the public under the obſervation and direction of two competent judges, choſen by each party. If the event be adverſe to my aſſertions, I ſhall deſervedly be conſidered as unqualified for juſt obſervation; but if the event be according to my ſtatement, I ſhall gain little, becauſe the experience I have had muſt have declared the fact to the moſt common obſerver. Dr. P. adds, that he truſts Mr. G. will no longer find it "inconceivable, why ſuch experiments were made." But if he will read the report of this Inſtitution for the year 1800, 1801, and 1802, and the ſtatement of evidence in 1804, it will appear inconceivable to Dr. P. that Mr. G. ſhould not acknowledge that the fact in queſtion, viz. whether a conſtitution that has undergone the cow-pock is not equally incapable of the cow-pock and ſmall-pox a ſecond time, is not proved by experiments affording evidence as deciſive as that of any fact in phyſiology or pathology.

'Mr. G. always writes, even when he differs moſt in opinion, in the language of a gentleman, and of his worthy intentions no juſt perſon can doubt; but it is impoſſible to read his animadverſions of the experiments made at this Inſtitution, without amazement at the evident failure of the author to perceive their views. By way of letting the Inſtitution down gently, he ſays, "No doubt, our intentions were founded on the moſt honourable motives, but that they were not called upon to try the effect of cow-pock in a conſtitution already vaccinated, and that, perhaps, they are not aware of the very important concluſions to be made from the experiments."

That Mr. G. did not ſee the concluſions drawn by the Inſtitution, is plain, from what has been already ſaid; but what other important concluſions he alludes to is not underſtood. It is true the Inſtitution were not called upon particularly to try the effects of vaccine matter upon patients already vaccinated; but if they could eſtabliſh the evidence, conveniently, of two important facts on the ſame occaſion, it would have been unwiſe to have neglected the opportunity. This was done, and it has been eſtabliſhed that a perſon who has had either the cow-pock or ſmall-pox is again incapable of either the one or the other. The practical concluſion follows, and was ſet forth fully at the laſt meeting. Mr. G. next objects to experiments of inoculation of ſmall-pox and cow-pock at the ſame time, from what happened at the Small-pox Hoſpital early in the practice; where the cow-pock modified the ſmall-pox when the two operations were combined. Here Dr. P. regrets that Mr. G. has not extended his reading to the report of this Inſtitution for 1800-1-2, and that he has confounded ſimultaneous agency of the two infectious matters in perſons who have not yet been vaccinated or variolated with ſimultaneous agency of the two infectious matters in thoſe who have undergone ſmall-pox or cow-pock. The Small-pox Hoſpital caſes are of the former deſcription; the caſes of the Inſtitution are thoſe of the latter. Dr. P. flatters himſelf, that, if Mr. G. had read the report of this Inſtitution, he would probably have met with ſome inſtruction in the laws of agency of vaccine and variolous matter, when introduced at or nearly at the ſame time, in the ſame ſubject, who had neither had ſmall-pox nor cow-pock. Theſe laws were not aſcertained at the time of the publication of the excellent report of Dr. Woodville, and nothing but hypotheſis, however ingenious, was offered either by Dr. Woodville or Dr. Jenner on the caſes of ſmall-pox-like eruptions, which ſo often occurred in the Hoſpital practice. In the examination of Dr. Jenner's claims, publiſhed by Dr. P. in 1802, he made his remarks on theſe hypotheſes, but it was his ſubſequent experiments at this In-

titution that unravelled the mystery which seemed to prevail in the cases alluded to; and it now can be explained in what cases the small-pox by inoculation, or in the natural way, will break out during vaccination, if the time be known when the two matters are introduced into the constitution. Dr. P. flatters himself that Mr. G's objections cannot have the weight of a feather in this part of his objections, until he has refuted the experiments alluded to.

'Mr. G. having finished his remarks on his own cases contained in his former pamphlet, proceeds to relate some recent cases of small-pox after supposed cow-pock. 1. Mr. Callard's child, the sixth of Mr. G's cases, vaccinated April 1803, escaped the small-pox, though exposed often to variolous effluvia, till August 1804; when, after being in the house with a child loaded with small-pox, in ten days she became feverish, and in two days a dozen eruptions appeared like small-pox, and the fever subsided. The eruptions without maturating, died away about the fifth day. Dr. P. can scarcely admit this as probable evidence of the case being small-pox, there not being the decisive characters of that disorder.

'2. The seventh case of Mr. G; that of Mr. Dance's daughter. There is no reasonable objection against her having had the cow-pock, but the subsequent eruptive disease was equivocal, and so was the eruptive disease excited in another child by the matter of these eruptions; but a third patient, inoculated from the matter of the second, had decidedly the small-pox. However unsatisfactory, Dr. P. feels himself obliged to admit this to be a case of small-pox after cow-pock.

'3. Case eighth of Mr. G. No doubt the patient had the vaccina in the first instance; and however anomalous the subsequent eruptive disease, as the matter of the eruptions excited the regular small-pox in other persons, Mr. G.'s evidence must be admitted.

'4. The ninth case of Mr. G. The child (Hitchings) had what was called incomplete variola in the natural way after decisive cow-pock.

'5. The tenth case of Mr. G. is that of Rendall, which must be admitted as small-pox by inoculation after cow-pock.

'6 and 7. The eleventh case of Mr. G. are those of the Hodges', in Fulwood's Rents, in which the evidence is so strong for the cases being small-pox after cow-pock, that it is impossible Mr. G. could omit to insert them in his collection.

'8. The thirteenth case of Mr. G. Capt. Simmons' daughter passed through the cow-pock apparently in a regular manner, in 1801; but in 1804 she took the small-pox by inoculation, for the matter of the eruption produced the distinct small-pox in others.

'9. The fourteenth case of Mr. G. is that of Smith, recorded in the minutes of our Institution. This Dr. P. cannot consider as evidence for the purpose proposed, because it does not appear that the patient had previously the cow-pock; but there was no doubt of the succeeding disease being the small-pox.

'10 and 11. The fifteenth and sixteenth cases of Mr. G. are those of Mr. Bowen, surgeon, at Harrow, already recorded in the minutes of the Institution. As Mr. B. informs Mr. G. that in the first of these cases, his own daughter, she took the small-pox by inoculation after the cow-pock, for the matter of the eruption produced the small-pox in others, the only question is, Whether the cow-pock really preceded? The second case of Mr. Bowen is said, in Mr. G.'s work, to have been inoculated at this Institution four years ago, but who took the small-pox lately on inoculation. This is the only case which has been reported in the practice of this Institution, during five preceding years, of any one taking the small-pox after the vaccine inoculation. The answers to the queries proposed by our medical committee to Mr. Bowen have not yet been returned; but in the mean time the case is doubtful, because the proof of its being small-pox is only from the matter of the inoculated part producing small-pox in others; and we

know the local affection produced in perſons who have undergone ſmall-pox can excite the ſmall-pox in others. *

'Mr. G. has a chapter on what he calls an hybrid diſeaſe in the early part of the practice Dr. P. flatters himſelf, if Mr. G. had conſulted the examination of Dr. Jenner's claims, and the report of this Inſtitution, he would have been able to have explained the greater part of theſe caſes; but as they do not immediately bear upon the preſent queſtion, he abſtains from farther remarks.

'The obſervations on varicella are moſt aſſuredly juſt and important. They prove that the eruptions ſometimes remain longer than is ſuppoſed, viz. longer than ſix days, continuing even to the 10th, and that they ſuppurate or become puſtules, and thence are liable to be miſtaken for ſmall-pox. Mr. G. favours us with a chapter on the difference between caſual and inoculated cow-pock with reſpect to colour and appearance: but, however ingenious, Dr. P. abſtains from commenting upon them, becauſe of their not being eſſential to the grand queſtion before him, and on account of the length of the remarks on other more important parts of Mr. G.'s work.

'12. The ſeventeenth caſe of Mr. G. is one of natural ſmall-pox, eight years after what was deemed caſual ſmall-pox.† There is no doubt but the ſmall-pox occurred here in the natural way; but that the patient had previouſly cow-pock is ſhewn only by the evidence of farmers. All ſuch caſes muſt be unſatisfactory, for it is known that various affections of the ſkin may be contracted from animals by handling their ſores; and there is a hoſt of evidence in ſupport of the preventive power of cow-pock caught in the uſual way among farmers.

'The chapter on the effects of vaccinating on the hand, commences with obſervations which appear to be juſt and conſiſtent with what is related in the examination of Dr. Jenner's

* Mr. Bower informed the Inſtitution, through one of the Medical Eſtabliſhment, that in the caſe inquired after, *he did not himſelf ſee any eruptions, and had only the patient's authority, who refuſed to be examined.*

† Quere? Cowpock.—*E.*

claims; but Dr. P. feels no inclination to revive the inquiry: future times may, perhaps, diſtribute juſtice which has hitherto been withheld; and the immediate buſineſs of the chapter is, to determine whether the caſual cow-pock might not poſſeſs effects more decidedly permanent than by inoculation, from the virus being depoſited on a part of the body, where the ſkin, owing to its ſenſibility, may not be capable of giving the neceſſary ſtimulus. The reſult of Mr. G.'s experience is, that the livid tint of the vaccine pock is preſerved in the hand or fingers, whether by matter immediately from the animal, or from the human creature, and that it diſappears when freſh matter is inoculated in the uſual place of the arm.

'Mr. G. thinks his experience juſtifies the opinion, that inoculation in the fingers and hands promiſes a more certain method of producing a conſtitutional affection than in the uſual way, and he prefers the middle part of the ring finger as the beſt, being the leaſt expoſed to friction. At p. 110, are facts and obſervations ſubmitted for impartial inveſtigation.

'Mr. G. juſtly complains that illiberal abuſe has confirmed his doubts, and given reaſon to ſuſpect ſomething wrong in the practice, which it is vainly intended to conceal. Dr. P. coincides entirely in opinion with Mr. G. in all his remarks in this chapter, and approves eſpecially of Mr. G.'s conduct in not mentioning the name of the ſlanderers; for to ſuch writers it is only important to provoke the credit of a controverſy: the iſſue is of no importance to them.

'Among many valuable obſervations in this chapter, which are omitted only becauſe they do not immediately relate to the object in view, are thoſe on diſeaſes of the ſkin, ſuch as tinea capitis and ſporiaſis diffuſa, which alter the nature of the vaccine pock.

'The aſſertion is made, that a diſtinctly different kind of virus is produced, having no power of preſerving the conſtitution from any ſubſequent attack of ſmall-pox, and it has been thought the ſame circumſtances may take place in the inoculated ſmall-pox. Mr. G. does not allow the fact in the latter caſe, for experience (ſays he) teaches the contrary. Give me

leave to ſay (ſays Dr. P.), that inceſſant experience in the vaccine diſeaſe for ſix whole years has never inſtructed me that the ſkin diſeaſes above-mentioned, or any other, have ever altered the vaccine pock, ſo that the matter of it did not produce the genuine vaccina in others; or that the patients with ſuch ſkin diſeaſes were not as ſecure againſt the ſmall-pox as in other inſtances where there was no ſkin diſeaſe. There have been ſo many inſtances of ſkin diſeaſes at this Inſtitution, along with cow-pock, that Dr. P. does not heſitate to believe the above aſſertion is ill founded. Mr. G. however, ſtates a propoſition on the above fact, contrary to Dr. P. viz. "Vaccination is only the agent to excite a certain morbid affection of the ſkin, which creates in it the property of reſiſting the eruption of the ſmall-pox." Dr. P. has only to remark, as already done, that ſuch changes by diſeaſes have never been remarked at this Inſtitution among the numbers inoculated with ſuch cutaneous diſorders, but many caſes have occurred in which the pock or pimple produced had not the uſual characters of cow-pock both in the diſeaſed and apparently ſound ſtates of the ſkin; in ſome of which anomalous caſes the ſuſceptibility to the cow-pock was deſtroyed, and in others it was not. Nor could he ſay that the greateſt proportion of theſe anomalous caſes occurred in diſeaſes of the ſkin, but the uſual characters of the cow-pock were often deſtroyed by the ſcratching and rubbing ſo common in ſuch complaints.

'If Mr. G. had read the caſes of ſimultaneous agencies, or nearly ſo, of cow-pock and ſmall-pox, as publiſhed in the report of this Inſtitution, he would have ſeen that the appearance of variolous eruptions depends upon the conſtitutional affection, in ſome caſes, taking place ſooner, or as ſoon, as the vaccine; but when there are no ſuch eruptions, then it depends upon the vaccine conſtitutional affection taking the lead. The hypotheſis, that "the cow-pock produces only an affection of the ſkin which is preventive of the ſmall-pox, but that this ſtate of it may be removed by ſubſequent diſeaſes," appears to be both inconſiſtent with the phenomena, and un-

necessary. It is unnecessary, because the small proportion of failures may be accounted for more rationally; and the phenomena do not accord with the hypothesis; for when the failures have occurred, there has often been no evidence of any intervening cutaneous disease, except, indeed, febrile exanthemata; such as varicella, scarlatina, rubeola, &c.

'As to whether vaccination prevents the small-pox by making the skin resist the eruption of small-pox, it is a question of the mode by which unsusceptibility is produced; and Dr. P. conceives that it is the fact only which is in question at present. When Mr. G. states that milkers who have had the casual cow-pock are more secure than children, because less liable to skin diseases, Mr. G. forgets that as large a proportion, perhaps, of failures will be found amongst milkers as among children. The apparent coincidence of the cow-pock and small-pox has been explained by the report of this Institution, without being repugnant to the axiom, that two diseases cannot subsist together, at least not in the same part. The hypothesis, therefore, upon this point, by Dr. Woodville, Dr. Jenner, and Mr. Goldson, is now unnecessary, and contrary to fact.

'Dr. P. cannot help noticing how superfluous Mr. G.'s reasoning is to explain a case which yet remains to be proved; nay, he thinks the contrary is proved, viz. how it happens that the cow-pock affords only a temporary security, or till some eruptive or cutaneous disease occurs: for in scores of instances such cutaneous diseases have occurred, and yet the unsusceptibility of small-pox remains, and in many of the asserted cases of failure no such cutaneous affections intervened. Towards the close of the work, Mr. G. does Dr. P. the honour to animadvert on his proposal for re-inoculation of vaccine matter as a test of security; alleging that he cannot conceive that a second vaccination is a better test than variolous inoculation; for, says Mr. G. "Milkers have the disease more than once. This cannot be controverted. If inoculated cow-pock be the same disease, it must be guided by the same laws; but if any

intervening diſeaſe ſhould remove its action on the ſkin, then a repetition of vaccination would only be deceptious; becauſe, if it ſhould take place, the firſt will be deemed to have been imperfect without any juſt reaſon." Dr. P. has already anſwered theſe objections, and regrets that Mr. G.'s reading does not ſeem to have extended to what he has written; for if it had, he would have found the caſe of milkers having the vaccina repeatedly is on the ſame ground as that of having the ſmall-pox local affection repeatedly; and until Mr. G. ſhews, on a ſecond vaccine inoculation, that the regular cow-pock can be produced, ſuch as would be relied on by competent judges for ſecurity, and until he ſhews alſo, that vaccine matter inoculated even four or five days after variolous inoculation will produce any thing except a vaccine pock proportionate to the time of its growth, he muſt adhere to his opinion: that is, as long as the fact remains eſtabliſhed, that "a perſon who has gone through the vaccina is incapable of the ſmall-pox," ſo long will he maintain that a perſon who cannot have the vaccina excited a ſecond time, or even after the ſmall-pox, is incapable of the ſmall-pox.

'Dr. P. repeats his propoſal to Mr. G. of coming himſelf or deputing two friends to the Vaccine Pock Inſtitution, to decide the queſtioned facts by experiments, and lay the iſſue before the public. In the name of the Inſtitution in general, and his own in particular, returns his acknowledgments to Mr. G. for provoking the inveſtigation of a ſubject which is ſo much wanted to obtain preciſion in practice, which has been checked hitherto by ſo many pretenders to knowledge of the ſubject, and who would wiſh it to be believed that the hiſtory of vaccine inoculation was exhauſted by the publication of half a dozen inſtances of inoculated caſes on the promulgation of the new practice. Dr. P. willingly concedes to Mr. G. that a teſt of ſecurity is wanted for many of thoſe who have been or ſhall be inoculated, becauſe a criterion has been wanting to guide practitioners, and determine whether conſtitutional affection was produced or not; but, ad-

mitting that even all the adverse cases published are cases of small-pox after cow-pock, which does not appear to be the truth, they will only serve to regulate practice in future; for the immense mass of evidence in favour of unsusceptibility of small-pox after the cow-pock, demonstrates that the failures are more reasonably to be imputed to deceptions and deficiency of knowledge, than to exceptions to the law of the animal economy, that the vaccina produces unsusceptibility of the small-pox." *Medical and Chirurgical Review.*

'*January* 8, 1805. On Thursday, January 3, Dr. Pearson received a note from Mr. Jones, of Mount-street, a governor, informing him, that two children of the honourable commissioner Grey were vaccinated two years ago, and declared to be in a state of security from the small-pox; but that Mr. Jones having inoculated them with variolous matter, the infection appeared to have regularly taken, and he was inclined to think they would sicken on the day following. On Friday, January 4, Dr. Wier, of the *Sick and Hurt Office*, desired Dr. Pearson to visit these children in Park-street. Dr. P. found they had been inoculated ten days before with variolous matter, in one place in each arm. In one of the patients the matter had taken, so as to produce a pock not unlike to some cases of irregular cow-pock rather than small-pox. They were already in a scabbing state, but probably contained a little lymph, with which Mr. Jones said he would inoculate other patients who had neither had small-pox nor cow-pock. The other child had a similar pock in one arm, the puncture in the other arm having failed. Neither of the patients had been constitutionally ill, and Dr. Pearson did not hesitate to say that the affection in this case was merely local, although the matter of the pocks might produce the regular small-pox in susceptible subjects.'

'Dr Pearson observed that there was a scar in one arm in each of the children from the vaccine inoculation. Both Mr.

Jones and Dr. Wier considered these to be cases of small-pox after the cow-pock, until the nature of the cases was explained to them.'* *Ibid.*

Observations on a Case of Diabetes Mellitus, by Dr. DUNCAN, *Senior; with the history of the morbid appearances which were discovered on Dissection. By* Dr. MONRO, *Junior.*

The history of this case serves to evince, with most others of the same disease, the inefficiency of art to combat it upon any principles of cure that have been yet suggested. The patient was a young woman, who had been long and repeatedly in the Royal Infirmary at Edinburgh, under the care of different practitioners. A great variety of attempts to cure the disease had proved of no avail. Nor, either by regimen or by medicines, could any considerable benefit, even in the way of alleviation, be obtained. The following account of the appearances after death is given by Dr. Monro, jun. and is too important to be withheld from our readers; nor shall we attempt to mutilate it by abridgment. It is proper to observe, that Dr. Monro was assisted in his examination by his father, and by his assistant, Mr. *Andrew Fyfe.*

'Account of the Dissection of Isabel Symington, who died of Diabetes Mellitus, in the Royal Infirmary of Edinburgh, March 26, 1804, and whose Body was examined March 27.'

'1. *Of the Fat.*—The fat within the thorax, abdomen, and pelvis, seemed entirely converted into a gelatinous-like matter, somewhat of an amber colour. It was of different degrees of density, and of different colours, in different parts of the body. In the omentum it was of a straw colour; but around the kidneys, spleen, pancreas, and on the surface of the heart, of a brownish-red colour. In some places there were vessels which passed over the membranes containing it. When slightly pressed between the fingers, it did not seem unctuous.

* Nine tenths of all the reported cases of small-pox after the vaccine, are of this description, owing to practitioners having not discriminated between a mere local affection, and a constitutional disease; the former of which may probably be excited an indefinite number of times even after small-pox itself.—*E.*

'Upon examining this substance by one of Dollond's compound microscopes, I observed a semi-opaque, gelatinous, browniſh liquor in the interſtitial cellular ſubſtance, which, in a great meaſure, concealed the fat; the greater part of which had been removed by abſorption. The follicles of the fat were much ſmaller than thoſe of a healthy perſon, and of unequal ſizes, the diameter of ſome of them not exceeding the fourth of that of others. This alteration of the fat is not altogether peculiar to diabetes; a ſimilar alteration has been obſerved by my father in ſome caſes of anaſarca.

'The ſubcutaneous fat was in very ſmall quantity, and was not accurately examined.

'2. *Of the Circulating Syſtem.*—The heart was very ſmall, of a pale colour, and contained little blood. Its ſurface preſented an unuſual appearance, as the fat upon it was diminiſhed in quantity, and concealed by a gelatinous matter effuſed into the cellular ſubſtance. There was alſo a ſmall quantity of this matter at the roots of the pulmonary artery and aorta, which extended alſo along the margo acutus to the apex of the heart. A thin layer of the ſame kind of matter covered ſome parts of the left ventricle. The coats of the arteries were not thickened. Upon cutting into the aorta, I obſerved the innermoſt coat of a bright ſcarlet colour, which led me to examine, whether or not the ſame colour extended through its branches within the abdomen and pelvis. I found the innermoſt coats of the veſſels alſo of a red colour, though not of ſo deep a red as the arch of the aorta. The pulmonary artery had the ſame tinct as the branches of the aorta. This very unuſual colour extended from the pulmonary veins into the left auricle, and alſo to the mitral valve, but upon the pulmonary artery only as far as its ſemilunar valves. The columnæ carneæ of both ventricles, and the ſeptum cordis, were of the uſual colour.

'This extraordinary redneſs of the innermoſt coat of the aorta and its branches, of the pulmonary artery and pulmonary veins, did not ſeem to have been the effect of inflammation; for no red veſſels could be ſeen, either by the naked eye, or with

the aid of a microſcope. It was not owing to coagulated blood adhering to the inner coats of the arteries, as it could not be wiped off: nor to blood effuſed between the muſcular and innermoſt coat, as no blood was found there when the innermoſt coat was removed from the muſcular coat.

'3. *Of the Abſorbent Syſtem.*—The ſize, colour, denſity, and internal organization of moſt of the glands connected with the abſorbent ſyſtem, within the pelvis, abdomen, and thorax, had ſuffered a material alteration. Many more lymphatic glands were apparent than in the ſound ſtate of the body. The iliac, lumbar, meſenteric, cœliac, and bronchial glands were much enlarged. Their ſize varied, from that of a dried pea to that of a walnut: one of the bronchial glands was about the ſize of a ſmall hen's egg. The enlarged meſenteric glands were of an oval figure, much flattened, and of a yellowiſh colour. There were a great many enlarged glands in that part of the meſocolon, attached to the colon; but I found no appearance of glands upon the coats of the ſmall or large inteſtines. Thoſe glands neareſt the inteſtines were of the ſmalleſt ſize. Thoſe near to, or at what is called by anatomiſts the root of the meſentery, were the largeſt.

'The natural texture of many of theſe glands was in a great meaſure deſtroyed. No veſſels could be ſeen in them, though ſome of them contained matter more or leſs fluid. The lumbar glands were filled with a matter like the fibrine of the blood. The bronchial glands were to the touch hard, and filled by a calcareous matter of a dirty white colour, and very like to chalk and water.

'Although almoſt all the glands connected with the abſorbent ſyſtem were conſiderably enlarged, yet none of the lacteals or abſorbents ſeemed to be dilated, nor were any of the lacteal veſſels filled with chyle.

'The arboreſcent courſe of the abſorbents of the liver could be diſtinctly traced, as they were filled with lymph. Unfortunately, in the removal of the thoracic and abdominal viſcera, the thoracic duct was deſtroyed.

'4. *Of the Alimentary Canal.*—Upon the inſide of the œſophagus there was ſome whitiſh matter. The ſtomach contained only a ſmall quantity of a glairy fluid, and a ſmall quantity of a matter reſembling in colour the yolk of egg, which was probably bilious matter. The contents of the ſtomach had not the ſlighteſt degree of ſub-acid ſmell. The innermoſt membrane on the left great ſac was of a reddiſh colour; as was alſo a ſmall portion of the ſame membrane near the pylorus, and upon it were a number of ſpots of extravaſated blood. The villous coat near the pylorus was much corrugated, and thrown into folds. The great and ſmall inteſtines contained but a ſmall quantity of liquid bilious-looking fluid, but no hardened feculent matter. A ſmall portion of the ilium bore marks of inflammation in a ſlight degree. The arch of the colon was much contracted; the ligaments were unuſually ſtrong. The appendices pinguedinoſæ ſeemed to have undergone the ſame kind of change as the fat in the abdomen, pelvis, and thorax. The meſentery and meſocolon were in many places of a reddiſh colour, which ſeemed to be given by the reddiſh-coloured jelly which covered the fat, ſhining through the tranſparent peritoneum of the meſentery.

'5. *Of the Aſſiſtant Chylopoëtic Viſcera.*—The liver, ſpleen, and pancreas, were ſound. The gall-bladder was of the uſual ſize, and nearly half full of bile; the colour of which reſembled orange orpiment. Upon opening the gall-bladder, I immediately remarked that the bile had a ſub-acid ſmell. Dr. Rutherford and Mr. Shireff, who alſo examined it, concurred with me in this opinion. It had the common degree of viſcidity.

'As a proof how fallacious the ſenſe of taſte is, and how different in different individuals, in the preſent inſtance the taſte of the bile appeared different to four very accurate obſervers; ſeeming to two to be merely bitter, ſweet to a third, and to a fourth almoſt inſipid. The gall ducts were of the uſual ſize.

'The omentum majus extended as low down as the umbilicus. It was remarkably thin, and a ſmall quantity of blood was contained within its blood-veſſels. The fat here had undergone the ſame change as in other parts of the abdomen.

'6. *Of the Organs of Urine and of Generation.*—The kidneys were ſomewhat lobulated. They were harder to the touch, and more of a pink colour than in the ſound ſtate. Both kidneys were broader, thicker, and more rounded than uſual, though not longer. The kidney of the right ſide was much more curved than the left; and upon its anterior ſurface there was an unuſual projection, ſuch as is produced by purulent matter, hydatids or calculi lodged within the pelvis of the kidney. Upon dividing the right kidney into two equal portions by a longitudinal inciſion, it appeared as if it had been very ſucceſsfully injected. Many blood-veſſels, both in the cortical and medullary part, where filled with florid blood, owing to which the diſtinction between theſe parts was not well defined,

'The pelvis, at firſt ſight, ſeemed to be filled with a tranſparent yellow-coloured ſubſtance, but, upon a more minute examination, this was found to be effuſed on the outer ſide of the pelvis and infundibula.

'Upon making a longitudinal ſection through the unuſual projection in the right kidney, it was diſcovered to be as ſound as any other part of the kidney, with the exception of a few ſmall cavities within the ſubſtance of it, which were capable of containing a garden pea. Theſe cavities were diſpoſed irregularly through it, and were filled with the ſame gelatinous ſubſtance that was obſerved in other parts of the body.

'The ſmell of both kidneys was ſub-acid, but not ſo evidently ſo as that of the bile. The fat around the kidneys had undergone the ſame change as in other parts. The bladder of urine was contracted. The uterus, Fallopian tubes, and ovaria, were in their natural ſtate.

'7. *Of the Organs of Reſpiration.*—The pleura coſtalis and pulmonalis adhered to each other on both ſides. On the left

ſide, the adheſions were partial, long and ſlender, probably elongated by the aſcent and deſcent of the lungs. On the right ſide, the adheſions were ſo ſhort, and ſo general, as to render it difficult to ſeparate the lungs from the ſide. A layer of coagulable lymph, about the thickneſs of an half-crown piece, covered the greater part of the lobes of the lungs on the right ſide. The greater portion of the cellular ſubſtance, and cells of the right lung, was found filled with a cheeſy matter of a light green colour, which rendered the lungs as hard as the liver, and ſo denſe as to ſink readily in water. Between the diſeaſed and ſound portions of the lungs, there was a very diſtinct line of coagulable lymph.

'The right lung adhered very firmly to the diaphragm. There was alſo in it a ſmall ſac, which was filled by a watery fluid. Its parietes were lined with coagulable lymph.

'The lobes of the left lung had nearly the uſual feel. But upon cutting into them, blood was found effuſed within many of the air-veſicles, and into the interſtitial cellular ſubſtance, eſpecially near the ſurface. There were many portions of the cartilages, not only in the trunk of the trachea, but alſo in its branches, of a florid red colour. Theſe portions were of unequal ſizes, ſome of them about a quarter of an inch in length, others leſs.

'This florid red colour extended into the ſubſtance of the cartilages, and was not produced by blood coagulated on their ſurface. The veſſels containing red blood were not viſible to the naked eye within the florid portions of the cartilage. My father, Dr. Home, Drs. Duncan *ſenior* and *junior*, Mr. Fyfe, and Mr. Shireff, who paid particular attention to this diſſection, examined theſe red portions of cartilage, and were convinced that the red colour was within the cartilages.

'Beſides theſe morbid appearances, there was a ſmall quantity of watery fluid within the cavity of the abdomen, and alſo within the pericardium.'

In the opinion of Dr. Duncan, nothing diſcovered in this diſſection affords grounds for any certain concluſion reſpecting

the nature of the diſeaſe. By different pathologiſts, they will be conſidered as corroborating different theories, and, not improbably, afford a foundation for new conjectures. He thinks it likely, that the greater part of the appearances which preſented themſelves were rather the conſequences than the cauſes of the diabetes. We ſhall be glad to ſee the reaſons which incline the learned profeſſor to this opinion. In the mean time it appears to us obvious to remark, that the kidneys, the diſordered function of which affords the conſtant and characteriſtic mark of the diſeaſe, were in an evidently morbid ſtate; a circumſtance which ſtrengthens the opinion that theſe organs are the primary ſeat of the diſeaſe. The broader, thicker, and more rounded form of the kidneys; the pink colour, exceeding what is natural; the greater degree of vaſcularity; are all appearances that can only be explained, as it ſeems to us, upon the ſuppoſition of an inflammatory action taking place in them; a ſuppoſition rendered further probable, by that general febrile ſtate which is a never-failing concomitant of diabetes, and which in all caſes ſeems to indicate the preſence of inflammation in the ſyſtem. If this view of the diſeaſe be at all well founded, it evidently leads to a mode of treatment the very reverſe of what has been hitherto purſued. Inſtead of tonics, aſtringents, cold bathing, and a ſtimulating diet of animal food (means that have been ſhewn by abundant experience to poſſeſs ſo little efficacy), a mild antiphlogiſtic regimen, with occaſional evacuations, and topical remedies, ſuited to the habit of the patient and the degree of topical affection, promiſes, in our opinion, to fulfil the intentions of the practitioner more ſucceſsfully, as ſquaring better both with the phenomena of the diſeaſe, and the appearances on diſſection.

Ibid—from Duncan's Annals of Medicine, for 1803—4.

Fœtus found in the Abdomen of a Boy fourteen Years of Age.

THIS extraordinary phenomenon occurred lately in one of the French provinces, and was communicated to the *Ecole de Medicine* of Paris by M. Blanche. The youth was of a feeble conſtitution, and from early infancy had complained of a pain in the left ſide. This part gradually increaſed in bulk; the laſt falſe ribs became elevated, and preſented an appearance of deformity. Things went on in this way with little alteration as he grew up, till within a few months of his death. His diſeaſe was at one time ſuppoſed to ariſe from worms, and at another from the diſorganization of ſome one of the viſcera. The pain at length grew more acute, accompanied with fever and purulent ſpitting, and ended at length in maraſmus.

A few weeks before his death he paſſed by ſtool a lock of hair. On examination of the body after death, a large tumour was found in the left hypochondrium, within the colon, or communicating with it. Upon opening the inteſtine, the tumour was found covered with purulent yellow matter, and contained a maſs of hair and a fœtus nearly oſſified, and of a very irregular figure. The head was elongated from before hindwards, and the ſcalp was covered with hair: immediately below two ſmall tufts of hair, which occupied the uſual ſituation of the eyebrows, a depreſſion was obſerved, ſeeming to point out the ſeat of the orbits, near which was a cartilaginous ſubſtance in the ſituation of the ear. There were ſeven teeth, which were very compact in their ſtructure. The trunk was bent forwards. In the uſual place of the ſuperior extremities were two oſſeous points denuded of ſk n, and a ſimilar appearance at the place of the right inferior extremity. The lower extremity on the oppoſite ſide was entire, and preſented different curvatures: the foot had only three toes, each furniſhed with a large and thick nail. Something like an umbilical cord was obſerved ariſing from the anterior part of the neck, and

which, becoming enlarged, was ſoon loſt in a ſpongy maſs adherent to the internal ſurface of the colon. The whole of the fœtus gave a reſiſtance to the touch like an oſſeous ſubſtance; which ſhews it to have been probably as old as the ſubject to which it was attached.

The ſingularity of this caſe induced the Society to refer it to a committee for a more particular inveſtigation; and Meſſrs. *Cuvier*, *Richard*, *Alphonſe Leroy*, *Baudeloque*, and *Jadelot*, were nominated for the purpoſe. From their report it appears that the maſs forming the tumour had many points of reſemblance to a human fœtus. It was ſituated in a cyſt within the tranſverſe meſocolon, and which communicated with the cavity of the inteſtines; but the communication was narrow, and evidently recent or accidental. The tumour therefore was not ſituated within the primæ viæ. The maſs being diſſected with extraordinary caution, diſcovered traces of ſome of the organs of ſenſe; there were likewiſe a brain, ſpinal marrow, and nerves of a very large ſize; muſcles that had degenerated into a kind of fibrous matter; a ſkeleton compoſed of a vertebral column, a head, a pelvis, and the beginnings of almoſt all the extremities; an umbilical cord, which was very ſhort, and inſerted into the tranſverſe meſocolon, exterior to the cavity of the inteſtine; laſtly, an artery and a vein, ramifying at each of their extremities, both on the ſide of the fœtal maſs and on that of the ſubject to which it was attached.—The exiſtence of the preceding organs is quite ſufficient to eſtabliſh the individuality of the maſs, and to prove that it was not a mere appendix or excreſcence of the ſubject in which it was found, although it was deficient in the organs of digeſtion, reſpiration, urinary ſecretion, and generation.

With reſpect to the origin of this fœtal maſs (for ſuch it muſt be admitted to be), the committee take ſome pains to prove that it could not have been introduced into the body of the boy after birth, for his ſex was perfectly aſcertained; of courſe, he could not have been fecundated; nor could he have fecundated himſelf, there being not the leaſt trace of the ſe-

male sex discoverable in him. It must therefore, they conclude, have been born with him. Its situation in the mesocolon still remains unaccounted for: the committee, however, offer the following explanation of the matter.

It is not uncommon to observe newly-born animals united together by the back, belly, or head, or in many parts at once; this might without difficulty be conceived to take place from compression of the two embryos whilst in nearly a gelatinous state in the uterus. In other cases, the two animals are so identified, that several organs are wanting to each of them, and are replaced by organs common to both. In the former case, the monstrosity is owing to a mechanical cause only; in the latter it must be referred to a primitive fault in the organization of the germs. In the case detailed above, either of these circumstances may have happened: one of the germs may have penetrated the other by some mechanical cause; or it may have been the effect of the primitive constitution of the germ, the explanation of which is not more obscure than every thing else pertaining to the mysterious subject of generation. Upon this idea, our surprise must cease at finding a fœtus existing in the abdomen of another individual; and it becomes a matter of indifference in which of the sexes such a phenomenon takes place. The mode of its adhesion and growth is quite analogous to that of extra-uterine fœtuses, and which is now sufficiently understood. *Ibid.*

An Account of the Morbid Appearances observed in two Cases of Diabetes Mellitus. By DANIEL RUTHERFORD, M. D. Professor of Botany in the University of Edinburgh.

CASE I.

Dissection of John Robinson.

Upon opening the body, a much greater quantity of fat was found both under the skin, and in the cavities of the abdomen and thorax, than might have been expected from the apparent emaciation of the body; indeed, the skin was uncommonly thin.

In the abdomen the blood-vessels all seemed unusually large, and very much distended with blood. The omentum contained a considerable quantity of fat, around large veins filled with black blood. The stomach and small intestines were of natural size and appearance, except that, on the coats of the intestines, the vessels were all very large, and distended with blood, even at their minutest ramifications, giving them exactly the appearance as if they had been well filled with a red injection. The coats of the smaller intestines seemed thicker, and more pulpy than usual. The colon was very large, and distended with air to the utmost; it formed a large doubling under the liver; throughout its whole length, contained very many little balls of hardened fæces. The mesentery was considerably loaded with fat. The vessels were proportionally large and distended as those of the omentum. The lymphatic glands were uncommonly large, soft, and red; their surface too was painted with many red vessels, or with vessels filled with red blood.

The liver, perhaps rather small, was otherwise in every respect in the most natural state, except that it lay far up under the edge of the ribs, pressed thither perhaps by the distended colon. The gall bladder rather large and flaccid, yet containing a considerable quantity of very deep yellow bile. The pan-

creas was perfectly sound and natural, and also the spleen, though perhaps rather large. The kidneys were much augmented in size, soft, with their surfaces painted with numerous vessels. The vessels were uncommonly dilated. The emulgent vein, *e. g.* of the right side, was not under 3-4 of an inch in diameter, as it appeared distended with blood. The ureters also were considerably dilated, the bladder seemed capacious, its coats thickened; and it was half filled with liquid.

In the thorax there was a considerable quantity of fat in the mediastinum, and in the lower part especially, running along the diaphragm. The lungs were apparently perfectly sound; a few adhesions were observed betwixt them and the sides of the thorax, and also betwixt them and the pericardium. The lungs in texture were perfectly right, or even perhaps more spongy and pervious to air than common. The heart of moderate size, flaccid, and pale, though the coronary veins were greatly distended with black blood. The large cavities contained a considerable quantity of very dark blood, generally fluid, though some had coagulated slightly both in the right auricle and ventricle. In the anterior mediastinum, in the site of the thymus, was a cluster of glands altogether like those of the mesentery, in several of which were calculous concretions, one not much smaller than a small horse bean. The proper glands of the lungs, those situated at the ramifications of the trachea, were unusually large, soft, and of a brilliant black colour.

The age of this man was between 40 and 50.

CASE II.

Dissection of Ann Laidlaw, aged 9 or 10.

On external examination, every part of the body seemed to be much emaciated and reduced in bulk, except the abdomen, which was uncommonly distended with what was afterwards

found to be air in the ſtomach and ſmaller inteſtines, and fæces collected in the larger ones.

When the muſcles covering the abdomen and thorax were thrown back, they ſeemed to be very ſlender, and of a rather more florid red colour than they uſually are in the healthy ſubject. The fat was entirely aboliſhed, nothing being left but the cells in which it was formerly contained. The lungs on both ſides adhered ſlightly in ſome places to the pleura coſtalis; but, on the right ſide, beſides adhering every where very firmly to the pleura of the mediaſtinum, a quantity of coagulable lymph, of a yelloviſh colour, was found effuſed between the pleura of the inferior and middle lobes of the lungs and the mediaſtinum. On both ſides, the lungs were rather of a pale colour externally, but they felt firmer to the touch than in the healthy ſtate; and, on cutting into the ſubſtance of them, a puriform fluid was ſeen exuding from different places, although no diſtinct tubercles could be perceived, and there was little more than the common quantity of ſerum effuſed into either cavity of the thorax.

The pericardium contained about four ounces of a yelloviſh tranſparent ſerum. The heart was of the natural ſize, unuſually free from fat, and rather of a pale colour. The right ventricle very flaccid, the left firm and contracted. The internal ſtructure of the heart was natural; but, on opening the aorta, the inner ſubſtance of the anterior ſide of it was of a red colour, and the redneſs extended from the commencement of the aorta to that part where it paſſes through the diaphragm into the abdomen. The aorta below the diaphragm was, in every reſpect, in a healthy ſtate.

The pulmonary veins and vena cava did not appear to be any way diſeaſed; ſeveral of the bronchial glands were conſiderably enlarged; in particular, one on the right ſide, which reſembled a middling-ſized walnut, and contained a good deal of a browniſh ſubſtance, of a conſiſtence rather thinner than cheeſe. The trachea was perfectly natural.

The ſtomach was much diſtended with air, but, in other reſpects, had a healthy appearance, both externally, and when it was laid open to examine the internal coat. The upper part of the inteſtinal canal was uncommonly diſtended with air, and, in ſome places, the blood-veſſels near the junCture of the meſentery were filled with blood, giving ſomewhat of the appearance of inflammation. The caput cœcum, the colon, and rectum, were every where filled with hard fæces, by which they were diſtended to a ſize far greater than could have been thought poſſible in ſo young a ſubject: in other reſpects they were healthy. The glands of the meſentery and meſocolon were enlarged; but, though very numerous, none of them had attained a ſize larger than a common bean ſomewhat flattened, and ſome of them nearly white. The omentum was ſmall, contracted, and completely free from fat. The kidneys were ſomewhat enlarged, their colour natural; but, on cutting into them, the *tubuli uriniferi* were fully more diſtinct than uſual, and the pelvis of each was alſo conſiderably enlarged: no other morbid change of ſtructure was perceived. The ureters were much larger than common, in ſome places being nearly half an inch, in other places more, in diameter. The right lobe of the liver adhered firmly to the diaphragm in many places; but, in other reſpects, both as to external appearance and internal ſtructure, it was quite ſound.

The gall bladder contained a ſmall quantity of light-coloured yellowiſh bile. The bladder was nearly empty, but of a natural appearance. The ſpleen, pancreas, uterus, fallopian tubes, and ovaria, did not ſeem to be any way diſeaſed.

(CIRCULAR.)

Botanic Garden, South-Carolina,
Charleſton, 16th Auguſt, 1805.

Sir,

IT affords us very conſiderable pleaſure to be enabled to announce to you, and to every lover of ſcience, the eſtabliſhmen

of a *Botanic Garden*, in this place. The ſituation of our ſtate, ſo near the tropic, induces us to believe, that we poſſeſs many advantages, for the cultivation of exotics, which more northerly climes are deprived of; and we, therefore, flatter ourſelves, with the pleaſing proſpect, of being able to effect, with the aſſiſtance of our friends abroad, a very handſome, as well as uſeful and extenſive *Public Eſtabliſhment*, for the diffuſion of *Botanic Knowledge.*

Our firſt concern, will be the examination and arrangement of our *indigenous plants;* among which, there are, doubtleſs, many non-deſcripts. To extend the knowledge of our favourite purſuit, and to enlarge the field for *botanic reſearches*, we beg leave to propoſe to you an exchange of our indigenous plants, and of ſuch exotics, as the one can procure, and the other may want.

We ſolicit for ourſelves, and our infant eſtabliſhment, your friendſhip and aſſiſtance; and the more ſo, as a reciprocity of good offices, will not only ſecure to us individual eſteem; but will, at the ſame time, contribute to perfect the ſcience, to which we are mutually attached.

I am, Sir, Reſpectfully,

Your Obedient Servant,

JAMES SIMONS,

Chairman of the Standing Committee.

Communications to be addreſſed to either of the Standing Committee, viz.

Dr. Joseph Johnson,
Dr. Benjamin B. Simons,
Dr. Frederick Dalcho,
Robert Pringle, and
James Simons, Eſquires.

The 3d Vol. of the Aſiatic Annual Regiſter, contains an account of the life of a very eccentric character, the late General Martin, in which are the following particulars:

"During the laſt 15 years of his life, he was much afflicted with the ſtone and gravel; and diſliking to undergo the uſual ſurgical operation for that complaint, his ingenuity ſuggeſted to him a method of reducing the ſtone, ſo curious in itſelf, and ſo difficult in the execution, that we ſhould have doubted the truth of the fact, were it not atteſted by the poſitive evidence of ſeveral gentlemen of the firſt reſpectability. He took a very fine ſteel wire, of almoſt a foot long, one end of which he cut in the manner of a file. The wire thus prepared, he introduced by a *catheter*, through the *urethra*, into the bottom of the bladder, where the ſtone was ſeated. When he found the wire touch the ſtone, he gently worked it up and down, ſo as to give it the effect of a file; and this he continued to do for 4 or 5 minutes at a time, until the pain, which the operation of the wire produced, was ſo excruciating, that it obliged him to withdraw it. But finding that ſmall particles of the ſtone diſcharged along with the urine after the operation, he repeated it in the ſame manner from time to time, till in the courſe of 12 months, he ſucceeded in completely reducing the ſtone.

"This circumſtance exhibits a curious and remarkable trait of the eccentricity of his character. The contrivance was in itſelf ingenious; but his patience and perſeverance in carrying it into effect are ſo very extraordinary, that we apprehend there are few men who, in a ſimilar ſituation, would not rather indure the complaint than have recourſe to the remedy.

"Some years after the operation, gravelly concretions began again to form in his bladder; and, as he did not chooſe to try the wire a ſecond time, theſe continued to increaſe until the end of the year 1800, when they finally occaſioned his death."

Extract from the Britiſh Critic, in a review of a Pamphlet, entitled, "An account of Baptiſms, Burials, and Deaths, by Small-pox, within the Pariſh of Boſton, in the County of Lincoln, &c. &c.

"We ſhall briefly ſtate the ſubſtance of the reſult, and of the computations. From the former it appears, that very nearly one-twelfth part of all the deaths in Boſton, within fifty-four years, have been occaſioned by the ſmall-pox; and from the latter, that it is probable there have died by the ſame diſorder, in the United Kingdom, within the ſame period, 1,762, 135: or, 32,632, annually; and in all Europe, 22,026,699; or, 407,901, annually. The data, on which theſe computations are founded, ſeem to be free from exaggeration; and ſurely, the whole is ſufficient to awaken the moſt inattentive perſons to a ſerious conſideration of the importance of vaccine inoculation."

Royal Jennerian Dinner.

Friday the annual meeting of the Governors, Preſident, Vice-Preſidents, and Supporters of the Inſtitution for the extermination of the ſmall-pox, took place at the London Tavern.—About 230 perſons ſat down to dinner; after which *Non Nobis Domine* was ſung in very fine ſtyle.

Mr. *Travers*, in a very neat ſpeech, deſcribed the preſent ſtate of the ſociety, and the progreſs of the Vaccine Syſtem. He ſtated that the ſmall-pox was totally eradicated from Berlin, Geneva, and Vienna, as could be proved from the very higheſt authority. In England it was daily diſappearing, as would appear by the bills of mortality. The annual average of deaths for 50 years paſt was 2018; in the year 1804, they amounted to only 622. The deaths by the ſmall-pox within the laſt two months amounted to only 42.

According to the French report 60,000 perſons had been ſecured in the courſe of the laſt three months from the ravages of that deſtructive diſorder. Mr. Travers read ſeveral extracts from a pamphlet publiſhed in France, in which Dr. Jenner was deſcribed, as the ſaviour of the riſing generation. He had no doubt ſince Dr. Jenner's diſcovery had been made a national concern, in a few years this dreadful diſorder, which has been arreſted in its progreſs, would be totally eradicated in England, where it would be known only by name.

Dr. *Jenner's* health was drank with three times three, attended with thunders of applauſe. The doctor returned thanks in a very neat and appropriate ſpeech. He deſcribed the ſucceſs of his endeavours, and added, that he was enabled to inform the ſociety, that the enemies of the Vaccine Syſtem had been able only to produce two caſes of failure from the bills of mortality, one of which was of a child who died twelve months after of the ſcarlet fever, and the other three months after in ſhedding its teeth.

Mr. Chenevix's mode of preparing James's Powder.

Diſſolve together or ſeparately, in the leaſt poſſible portion of muriatic acid, equal parts of the white oxide of antimony (formerly called Algaroth's powder) and of phoſphate of lime. Pour this ſolution gradually into diſtilled water, previouſly alkalizated by a ſufficient quantity of ammonia: a white and abundant precipitate will take place, which well waſhed and dried, is the ſubſtitute I propoſe for Dr. James's powder. *Philoſophical Tranſactions.*

A Board of Health has lately been eſtabliſhed for the purpoſe of preparing and digeſting regulations for the moſt ſpeedy and effectual modes of guarding againſt the introduction and ſpreading of infection, and for purifying any ſhip or houſe in

caſe any contagious diſorder ſhould manifeſt itſelf in any part of the United Kingdom. This Board is to hold its meeting at Somerſet-place, and it is compoſed of Sir Andrew Snape Hammond, Sir Lucas Pepys, Dr. Reynolds, Sir Francis Milman, Dr. Hunter, Dr. Heberden, Sir Alexander Munro, and Dr. Harneſs. *Month. Mag.*

Mr. Stoddart gives the following as a good method of gilding upon ſteel.—To a ſaturated ſolution of gold in nitro-muriatic acid, add about three times the quantity of pure ſulphuric ether, and agitate them together for a ſhort time. The gold will be ſoon taken up by the ether in the form of nitro-muriate of gold, leaving the remaining acid colourleſs at the bottom of the veſſel, which muſt be drawn off by means of a ſtop-cock. The acid being diſcharged, the inſtrument to be gilt, having been previouſly well poliſhed and wiped clean, is to be dipped for an inſtant into the ethereal ſolution, and on withdrawing it, as inſtantly waſhed by agitation in clean water, to get rid of a ſmall portion of acid neceſſarily taken up with the metal. If this be neatly done, the ſurface of the ſteel will be completely and very beautifully covered with gold. *Ibid.*

Mr. Doberimer propoſes the following method to make white lead. Diſſolve litharge in weak nitric acid, and precipitate this ſolution with prepared chalk. The precipitate waſhed and dried affords a ceruſſe of the whiteneſs of ſnow. *Ibid.*

A Lamb was lately yeaned at Mr. Browns High Winder, in Weſtmoreland, (England) with eight legs, two tails, two ſeparate bodies, two necks, and only one head.

A Gooſe, belonging to Mr. J. Liſhman, of Slurdys, near Cartmel, this ſeaſon produced a goſling having four wings and four legs, and otherwiſe perfect. *Ibid.*

When ink-ſpots have remained long, they become iron-moulds, and are then taken out with more difficulty, and the more ſo, the longer they ſtand, in conſequence of the iron, by repeated moiſtening and expoſure to the air, having acquired ſuch an addition of oxygen as to make it inſoluble in acids. To diſcharge theſe old ſtains, an alkaline ſulphuret, or liver of ſulphur, ſhould be firſt applied in ſolution, and after this is well waſhed off, the lemon juice or other acid ſhould be applied.

As connected with this I ſhall here mention the beſt mode of taking out fruit or wine ſtains, and ſpots of greaſe or of wax. For the firſt, put about a table ſpoonful of marine acid (ſpirit of ſalt) into a tea-cup, and add to it a tea-ſpoonful of powdered manganeſe. Then ſet this cup in a larger one filled with hot water, moiſten the ſtained ſpot with water, and expoſe it to the fumes, that ariſe from the tea-cup, till the ſtain diſappears.

The fumes are thoſe of the oxygenated muriatic acid; but as they diſcharge all printed and dyed colours, this mode is only applicable to white articles.

Greaſe ſpots are moſt effectually removed by a diluted ſolution of pure potaſh, or cauſtic lye. Stains of white wax are taken out by ſpirits of turpentine, or ſulphuric æther; and the marks of white paint may likewiſe be removed by the laſt mentioned ſubſtance. *Skrimſhire's Chemical Eſſays.*

Receipts for making Writing-Ink.

To one quart of rain water, or ſoft river water, put four ounces of blue gall bruiſed, two ounces of green vitriol or copperas and two ounces of gum arabic groſsly powdered. Let the mixture be well ſhaken or ſtirred about now and then, and in twenty-four hours it will be fit for uſe. It is moſt conveniently made in a wide-mouthed bottle that will hold near double the quantity, where it may ſometimes be ſhaken together briſk-

ly; but be ſure you let it ſettle again before you pour any off. When you have uſed all that can be got off clear, a little more than half the quantity of the ſame ingredients will make you another quart.

What is written with this ink looks pale at firſt, but after a few hours becomes of a fine black, and I believe will never change. *Baker's Employment for the Microſcope.*

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*Mr. Holmes' Receipt.**

℞. galls ℥ 3: bruiſe and ſteep in lbs. 3 of white wine, beer or rain water; ſtir twice daily for eight days, add then ℥ 3 of clear gum arab. and ſtir twice daily for two days, then add ℥ 1¼ of green copperas, ſtir twice daily eight days longer, then ſtrain through a muſlin cloth and bottle it up with ℥ 1 of alum. *Univerſal Magazine of* 1749.

Ribancourt's Receipt.

A ſeries of Experiments made by Ribancourt, has furniſhed us with the following valuable receipt, for producing an uniformly black and permanent ink. 8 oz. of galls, and 4 of logwood, are boiled with 12 lbs. of water for an hour, or till one-half of its quantity is evaporated. This liquor is then percolated through a hair ſieve, and 4 oz. of vitriol, or ſulphat of iron, 3 oz. of gum arabic, 1 oz. of copperas, or ſulphat of copper, and 1 oz. of ſugar candy are added. The whole maſs is ſtirred to promote the ſolution of the ſalts and gum, after which it is left to ſtand for 24 hours. The liquid is then poured off from its coarſe ſediment, and preſerved in well ſtopped glaſs, or ſtone jars. This ink acquires a beautiful black colour, which it retains for a long time.

Chem. Annal. Vol. II.

* This gentleman was keeper of the records of the Tower.

Dr. Caldwell has now in the press, "A Treatise on the hidden nature. and the treatment of intermitting and remitting fevers, by J. Senac, M. D." translated from the latin, with notes.

DEATHS.

William Woodville, M. D. &c. physician to the Small-pox Hospital. Author of Medical Botany, of the History of Inoculation, and of a Treatise on the cow-pock. —Dr. Adams, Author of a Treatise on Morbid poisons, is elected in his place.

John Clark, M. D. &c. and Senior physician to the Infirmary of New Castle. Author of "Observations on the Diseases of Hot Climates, &c."

Dr. Noehden, conductor of the foreign department of the Medical and Physical Journal.—Dr. Arneman of Hamburgh, has undertaken to superintend this department.

James Currie, M. D. &c. of Liverpool, (England) Author of an invaluable Treatise on the effects of cold water in diseases, &c.

☞ We feel much gratified in observing that communications from the Museum are introduced into those valuable periodical English publications, the Medical and Chirurgical Review, and the Medical and Physical Journal. We shall be happy however if the Editors of the last mentioned work, will be as open as the former, in avowing the source from whence they extract their communications; as from the manner of their publishing those from Drs. Benjamin and John Rush, in their 14th vol. pp. 7 and 10, it would seem as if they were made directly to themselves. As we are ourselves extremely particular in noticing the source of every article introduced into the Museum, we hope the like justice will be administered to us. *Editor.*

☞ The occurrence of the Yellow Fever in Philadelphia, by the obstruction which produced in business of every description, must plead our excuse for the tardy appearance of the present Number. *E.*

MEDICAL MUSEUM.

VOL. II.....No. III.

Observations on certain Cases of secondary Disease, subsequent to the Measles, in a Letter to BENJAMIN RUSH, M. D. *by* ——.

District of Maine, March 9, 1805.

MY DEAR SIR,

LEST you should either not have seen it, or have forgotten it, I am desirous to put into your hands a short treatise on the *measles of Jamaica*, which the author represents (and I think truly) as differing from the usual measles of Europe. But before I proceed, I wish to make known to you certain cases (as I apprehend them to be) of *secondary* disease; which followed a visitation of the measles, in 1802, in the township where I reside, which lies about N. Lat. 44° 16′, and is forty miles from the sea.

This visitation appeared with us in the early summer months. As usual in this complaint, some of the patients called for medical advisers, some managed for themselves, and some let the disorder take its course. Many patients, in the space of some weeks or months after their attack had ceased, experienced considerable illness, which, or at least the particular form of which, I am inclined to attribute to the influence of *measles* which had been *ill cured*.—From the cases of this description, I have selected *five* of the dysenteric class, which occurred under my own no-

tice, in two families living cloſe to each other in a healthy part of the country, and of which I can ſpeak with ſome certainty, as three of them ended fatally, and were followed at my deſire and in my preſence by diſſections. I add a *ſixth* caſe of the dyſenteric kind, which took place within my own knowledge alſo, but under *mixed circumſtances*; that it may ſerve in our general compariſon. *Two other* caſes will afterwards be touched upon, of a *pulmonic* nature, which followed ill-managed meaſles; and ſeemed to have a great correſpondence with the malady of the five firſt of our patients.

CASES.

Caſe I. Auguſt 9, 1802, in the afternoon, a healthy little girl *nearly three years old*, was ſeized with ſome dyſenteric ſymptoms. The next afternoon ſhe had fits, which left her inſenſible; but in the evening, her ſenſes returning, ſhe roſe and walked into an adjoining chamber. The ſtools which ſtill occurred, continued looſe and of various colours and kinds; but ſhe complained of no pain except in her bowels; and even there, the pain ſeemed rather partaking of diſtreſs, than violent or conſtant. On the 13th, her pulſe became exceedingly ſlender; her hands grew cold before the reſt of her body, and at midnight ſhe quietly expired.

Auguſt 14, the *body was opened*. The larger inteſtines, from the cœcum to the rectum, appeared inflamed in their inſide, under the villous coat. They were alſo much *thickened*, and the outer coat was ſo *hardened*, as to appear to have advanced a ſtep towards becoming cartilaginous; exhibiting, as to maſs and ſubſtance, ſome faint reſemblance to the gizzard of a young fowl.—On the meſocolon and on the *outſide* of the larger inteſtines, were oval *tubercles* to the number of 80 or 100. Some were of the ſize of a dwarf (or French) bean; their colour was a dark red; and their conſiſtence equal to that of the liver; but they were free from ulceration. The *meſentery* had many of its glands enlarged, or at leaſt it exhibit-

ed many tubercles; of which some were inflamed. One portion of the *smaller intestines* also was inflamed to a considerable extent, but it had no tubercles.

The intestinal canal in various parts contained soft fæces; but had neither hard balls of fæces, nor contractions, nor one part of the intestines thrust within another part, nor could any other unusual affection be perceived in them.

One worm (a *lumbricus teres*) was discovered with faint remains of life.—But no perforation of the gut was seen in the parts examined, nor any worm in the cavity of the abdomen, which could explain the fit.

A part of the left lobe of the liver had its blood vessels turgid; and the liver in general seemed much enlarged. The gall bladder was full of dark-coloured bile.

The outer integument of the right kidney was inflamed.

The lungs, as seen through one part of the diaphragm, appeared to be sound.

Case II. August 14. A boy *about two years and a half old*, living in the next house, and apparently of an excellent constitution, was seized much in the same manner; that is, with violent purging, attended with fever, blood, mucus, and tenesmus. The fever ran high, but the pain by no means appeared to be considerable. He died on the 17th, *in a fit.*

On the 18th the *body was opened.* The minutes of this case being lost, I can only state in general, that the *tubercles* which were here discovered, were diffused over the upper, as well as over the lower intestine, and still retained their station on the mesentery and mesocolon; their number amounting in the whole perhaps to 200. There were worms also, like the preceding, in the intestinal tube; but they were here 22 in number, and of the medium length perhaps of eight inches.

Case III. August 15. A female *infant* was violently seized with dysenteric symptoms, attended however with no remarka-

ble degree of pain. After a ſtruggle of 5 or 6 weeks, ſhe recovered.

Caſe IV. Auguſt 17. A girl, *aged 6 years and 8 months*, was taken ill with dyſenteric ſymptoms; but like the reſt, ſhe experienced little pain; being able to move about the room till a ſhort time before ſhe died; which happened on the 29th.

Her *body being opened*, the tubercles were found ſcattered as in the ſecond caſe; but they prevailed moſt on the outer ſurface of the greater inteſtines. Some of thoſe tubercles had either receded from an inflammatory ſtate, or had not advanced into it; for their colour was yellow. Some were as large as a kidney (or Engliſh) bean. Some had penetrated ſo as to ſhew themſelves on the inner ſurface of the gut. One tubercle had ſeparated, owing to the mortification of the ſurrounding parts; and this ſeparation was on the inner ſide of the inteſtine. The whole of the colon was inflamed; it was alſo thickened, but it was tender to the feel; and within, it was of a dark red colour, reſembling that of a ripe mulberry; being under the operation of gangrene.

Worms, like the preceding, appeared to the number of 24; ſome of which had entered the œſophagus.

The liver exhibited little that was peculiar.

The ſpleen was unuſually ſoft and livid.

The integuments of the kidney were not noticed.

The lungs, as ſeen through the diaphragm, appeared in a natural ſtate.

Caſe V. Auguſt 18. Another girl, *whoſe age ſomewhat exceeded 5 years*, was taken ill in a ſimilar manner; and retained the ſymptoms for ſeveral weeks; but finally recovered, and is ſtill a healthy child.

None of theſe children (for it will be obſerved that theſe were all children,) I ſay not one of them was attended by a practitioner during their attack with meaſles; as they lived in the country, and applied for no aſſiſtance.

Caſe VI. About the ſame time, another female *infant*, for whoſe original attack of the meaſles ſome Glauber's ſalts had been given, though in an advanced ſtate of them; was ſeized with dyſenteric ſymptoms; but ſhe was ſoon relieved by new doſes of Glauber's ſalts. This infant thus imperfectly attended in the meaſles, reſided in a thick ſettled village.

The *two other* caſes, which were of a *pulmonic* nature and ſucceeded meaſles, will be ſpoken of hereafter.—Theſe two patients were *young men*, about twenty years of age.

I ſhall conclude what reſpects the *ſtatement* of theſe caſes by three general remarks.—1ſt. I do not mention all the inſtances of diſeaſe which aroſe at this period, in our neighbourhood, after ill-cured meaſles; becauſe I cannot at preſent be equally certain of the particulars, as in the inſtances above recited. 2d. I may affirm, that none of thoſe who were gently and early evacuated and bled, experienced a *ſevere attack of meaſles*; or any *ſubſequent* diſeaſe, which could be aſcribed to meaſles. 3d. No tendency in general to dyſentery manifeſted itſelf at this time within our little circle; and, as to pulmonary complaints of a chronic nature, they are at all times ſomewhat uncommon among us. The two laſt of theſe remarks appear to me of conſiderable importance, as to the queſtion before us.

The firſt *five* caſes recited above, I may now obſerve, ſeem to give room for the following *queries*.

Query I. Had *poiſon*, whether ariſing from wild plants or other articles, accidentally eaten, any concern in this buſineſs?

The anſwer is eaſy in the inſtances before us. Two of the children mentioned in the firſt ſix caſes, were infants at the breaſt; and one of them, for the moſt part, lived ſeparate from the others. The other caſes alſo to which I afterwards referred, were accompanied with circumſtances rendering this ſuppoſition too improbable for further notice.

Query II. If meaſles, and eſpecially ill-cured meaſles, in ſome caſes and ſome countries, are ſaid to lead to tubercles in the *lungs*; why may not tubercles *on the inteſtinal tube and its connected membranes*, follow alſo from the ſame ſources in other caſes and in other countries?

As this query ſeems reaſonable, it will paſs only with this comment. It is by means of theſe tubercles that we may poſſibly point out a correſpondence between the pulmonic and dyſenteric caſes above referred to; a correſpondence, which will receive further evidence, from the circumſtance of the *ſame treatment* having appeared to ſucceed in the cure of each.

Query III. If we ſay that the above patients whoſe bowels were affected, had *pure and independent* dyſentery, how ſhall we reply to the following difficulties?

1ſt. Dyſenteric ſymptoms (generally ſpeaking) never occurred with us, as I have mentioned, at this period, unleſs in caſes where meaſles were concerned. Secondly, in various parts of the world, fluxes often happen in the primary ſtate of meaſles; as Sydenham, Huxham, Watſon, Cullen, and others, have witneſſed in Great Britain. Tiſſot, alſo has noticed theſe fluxes in Switzerland; Rhazes (as quoted by Mead) ſpeaks of them in the Eaſt; and the author (ſoon to be mentioned) found them to be a fixed part of the diſeaſe in Jamaica. In our neighbourhood, the only variation is, that theſe dyſenteric ſymptoms occurred after a little interval, and not in immediate and viſible connection with the meaſles. Thirdly, the mortality with us was greater and more rapid, than in common dyſenteric caſes, where meaſles have no concern. Fourthly, I am inclined to believe that in proper dyſentery, the tubercles which are ſometimes found in diſſecting the inteſtines, ſhew themſelves generally *within* the inteſtinal tube in the firſt inſtance; and not *without* it, as with our patients. Fifthly, remedies which are *not* uſually employed in dyſentery, ſeem to have had influence, as we ſhall ſoon find, over three of our bowel-caſes which were deſperate. It is true, that we muſt abate ſomewhat from this laſt argument: ſince it may be thought that the common treatment for malignant dy-

ſentery is as yet imperfect; and that the very medicines employed in this caſe may themſelves be of uſe in future trials with dyſentery. Such are the reaſons to be urged in favour of the diſeaſe having been only a *certain kind* of dyſentery; ſpecially connected, in certain ſituations with meaſles.

But it is to be urged on the other hand, that in one houſe, where three of the children had been ſick, three men were ſeized with apparently true dyſenteries, while attending them; and another man was ſeized with the ſame complaint, who occaſionally attended two others of the ſick children in a neighbouring houſe: and it may be added, that if pure *phthiſis* and pure *ophthalmia* may follow meaſles, as their cauſe; ſo poſſibly may pure dyſentery.

Perhaps then we may find reaſon to decide thus between the two opinions. Meaſles may have left a ready diſpoſition in the children to *receive* true dyſentery from the common cauſes of dyſentery; and when dyſentery has once occurred, it may have exaſperated that *tendency to tubercles*, which every where ſeems to be a frequent attendant upon meaſles.

Query IV. Even upon the ſuppoſition that meaſles had their ſhare, (direct or indirect) in the above diſeaſes; it may ſtill be inquired, whether the tubercles which were diſcovered in the abdomen, *preceded*, or whether they only *accompanied* or *followed*, the new ſtate of inflammation?—In other words, ſince the pain at the commencement of tubercles or ſchirrus, is often ſo ſmall, as not to be noticed; we may aſk, whether the tubercles in queſtion exiſted unobſerved, before the occurrence of the new diſeaſe? or did they (ſee caſes 1 and 2) begin and ripen within 108 hours, or ſome ſhorter period, before death?—The ſame queſtion attends the *thickening and hardening of the inteſtines*.

The reaſonableneſs of the ſuggeſtions in this query as to the *ſudden riſe of tubercles*, eſpecially where there was a previous tendency to them; may be made manifeſt by a ſtatement of two or three facts.

A *ſudden* ſwelling of the glands lying *within our ſight or feeling*, is ſeen in ſore throats; and again it is ſeen in irritations

of the lymphatic ſyſtem from venereal buboes, and other cauſes both natural and artificial: and the diſappearance of many ſuch ſwellings is often as abrupt as their appearance.—As to the *internal* examples of ſudden ſwellings of glands or tubercles, take the following produced by Dr. John Hume, formerly a commiſſioner for the ſick and hurt ſeamen of the Britiſh navy; who writes as follows: "Dr. Mackittrick Adair, (of Antigua,) who had practiſed phyſic for a number of years in the Weſt Indies, mentioned his having opened a man who died the *third* day of the yellow fever. The whole body, he ſays, had ſomewhat of a livid appearance; the cavity of the abdomen ſeemed dry and deſtitute of ſerum; the *omentum* was full of black blood, and had on its lower edge a number of *round glandular bodies* full of the ſame ſort of *black blood*; the coats of the ſtomach, duodenum, and ilium, were remarkably inflamed; the liver was not increaſed in its bulk, though its texture ſeemed vitiated; the gall bladder was full of black bile; and there were ſome round worms in the cavity of the inteſtines; the urinary bladder was a little inflamed; the lungs were ſound; and the pericardium contained a *more viſcid* yellow ſerum, and in larger quantities, than common; and the cellular membranes were every where filled with a *tough* clay-coloured *mucilage*."—Thus then we have diſcovered *round glandular bodies*, filled with black blood, on the cawl of a man who died on the third day of a fever; that is, before it had raged 72 hours. In this particular inſtance alſo, the *viſcid* ſerum and *tough* mucilage may go ſome way towards explaining the more immediate *cauſe* of theſe glandular bodies.

Tubercles have been found repeatedly in the bowels of patients, who have died of dyſentery; but they are more frequent in ſome circumſtances or ſituations than in others: and in ſome of the diſſections made, the thickening, the hardening, and the ſubſequent ſoftening (by mortification) of the inteſtines, have alſo been particularly noticed. Some of the caſes thus deſcribed had a ſpeedy termination in death, (though leſs

ſpeedy than with us); but others of the caſes had ſome duration.*

I ſhall finiſh what regards the deſcription of our caſes, compared with thoſe of the ſerious epidemic dyſentery, by obſerving that where the *ſeat* of the tubercles in epidemic dyſentery *is particularly noticed*, it is ſaid to be *within* the inteſtines; and not *without*, as with us. It is alſo obſervable, that the patients examined by others were *adults*; whereas ours, who had bowel-affections were children; who (as is well known) are peculiarly liable to ſwellings of the meſenteric glands.—The *pulmonic* complaints alſo fell by preference, as was natural, on thoſe arrived at the age of puberty.

Let us now ſpeak of what was done for the relief of our patients.

Treatment of the above Caſes.

The *firſt* of our ſix caſes having in its commencement appeared to belong to proper dyſentery; medicines were adminiſtered accordingly. But the mother of this patient quickly objecting

* Sir John Pringle has given his diſſections in dyſentery more at large, perhaps than any other author. They were of adult patients, male and female. (See Army Diſeaſes, 7th Edition, p. 237 to 250.)—Dr. Baillie, not finding many caſes of tubercles in the inteſtines in Great Britain, refers chiefly to Pringle. (See Morbid Anatomy, 2d. Edition, p. 174-175.)—Sir Gilbert Blane, who ſuperintended ſeveral diſſections in the Weſt-Indies, yet refers chiefly to the ſame author. (See Diſeaſes of Seamen, 3d. Edition, p. 450-453)—Dr. Donald Monro, thought that the tubercles diſcovered by Sir John Pringle and Sir G. Baker in their diſſections, were uncommon; ſince in old dyſenteries, he himſelf had ſeen little beſides ſpots and eroſions; appearances, we may add, which with ſmall exceptions, were confined to the *inner* parts of the larger inteſtines. (See Edinburgh Eſſays and Obſervations, Literary and Phyſical, 3. 516-524; where he gives particulars, which he had refrained from inſerting in his work on Military Hoſpitals.) He had once obſerved the meſenteric glands oſſified, though not by dyſentery. (London Medical Tranſactions, 2. 362-365.—I cannot refer to Dr. Stark; my copy of his work being at preſent unfortunately miſſing.

to every thing tending to nauſea, and worms being ſuſpected to have ſome ſhare in the fit; ſmall doſes of calomel were alone continued; ſymptoms in other reſpects being combated as they aroſe.—The lancet was once employed in the *ſecond* caſe; and attempts alſo were made to obviate inflammation and obſtruction, without forgetting the dyſenteric ſymptoms (in the common acceptation of that term.)

The ſurviving patients however, were ſtill going on unfavourably, *when I recollected the little treatiſe on the meaſles in Jamaica, by Mr. Quier;* to which I alluded in the beginning of this letter. With the conſent of a medical friend whom I had a little before called in, the following medicines were adopted out of it, and given every ſix hours; namely, caſtor oil, weakened with a proportion of olive oil; magneſia, or the teſtaceous powders, employed diſcretionally according to the ſtate of the body, but commonly alternately; gum Arabic; and an opiate. Clyſters alſo were given on the ſame plan.—I forget what ſhare calomel had in our preſcriptions. The reſult however was as follows. The *third* and *fifth* patients eſcaped; and the life of the *fourth* was prolonged under deſperate circumſtances. For the *fifth* patient, the lancet was once uſed; but I ſhall perhaps be blamed for not having adviſed a very liberal employment of it in the whole of the four caſes which ſucceeded the firſt diſſection; and eſpecially in the beginning of them. Sydenham indeed had adviſed it in caſes of flux accompanying meaſles; but our ideas were not yet ſufficiently firm as to the connection between the preſent complaint and meaſles; and the fear of the public opinion (where ſeveral deaths had occurred) was too conſiderable, to allow us to vary much; and eſpecially in an oſtenſible manner, from the common practice for the cure of dyſentery.

The *ſixth* caſe, ſtanding on ſeparate grounds, furniſhes no direct evidence as to the new treatment; but only preſents a contraſt to the other caſes, whether it be conſidered as proper dyſentery, or as a leſs exaſperated ſtate of ſecondary diſeaſe.

It is not only on the caſes which are related above, that I have founded my conjecture as to the utility of the foregoing

medicines, when thus combined. For I employed them in the two caſes where *pulmonic* affections occurred, ſubſequent to ill-cured meaſles; though in one of theſe caſes, the appearances had almoſt precluded hope. A diet of milk and vegetables was at the ſame time recommended; but no other medicines concurred in the cure; unleſs perhaps antimonials and elixir of vitriol, and yet the recovery ſeemed more regular and *comparatively* more ſpeedy, than in the caſes where the inteſtines alone had ſuffered.

Conjectures.

How the above medicines operated (if to them is to be attributed any part of the favourable reſult which occurred,) may ſeem matter of doubt. For myſelf, I incline to explain it principally on the footing of a *check being given to acrimony* (and thence perhaps to viſcidity;) by means of the oils, the mucilage of the gum, and the abſorbent powders.* The laxative qualities of ſome of theſe articles, were probably highly uſeful; yet thoſe who died, it muſt be obſerved, alſo took laxatives; but they were principally laxatives of another nature. Among the *chief* advantages of the opiate perhaps was that, of its admitting larger doſes of the oil and magneſia, by checking their purgative qualities.

I am the more inclined to make further experiment of the above method of treatment in future caſes, from obſerving that Dr. Watſon (ſenior) ſays, that with patients in the worſt kind of meaſles, "a draught of *freſh milk*, either alone or mixed with

* Mr. Quier, in a note to his "Account of the *dry belly-ache* of the Weſt-Indies," probably explains to us a part of his *own* notion of the mode of action of his medicines. Having referred to *De Haen's Ratio Medendi*, he ſays, "It is a pity, that the *emollient, lubricating, diluting, and enveloping* method ſo much recommended by this gentleman, is not more followed in all the ſpecies of the dry belly-ache." See *Letters and Eſſays*, hereafter to be pointed out, p. 182. — Dr. Cullen in his lectures) aſſerted, that *oils* upon the plan of De Haen, did not anſwer in trials made in Scotland.

water, was moſt grateful, and tended much to the alleviation of their complaints, as well as recruiting their ſtrength." Sydenham among his remedies, recommended weak milk and water boiled, and demulcents; milk, demulcents, and an oily linctus made part of the treatment of Mead. Dr. Percival uſed a demulcent and a neutral ſalt in his preſcriptions; to ſay nothing of other authorities.

In mentioning theſe things, we do not mean to reject other aids; as will be ſeen in particular, when we ſpeak of the diarrhœa in meaſles.

But to return to the *oil*, let us aſk whether oil may not be uſeful in ſome ſhape or other, in caſes of *tubercle, and even of ſchirrus*, viewed in a *more extenſive* ſenſe?—Olive oil, ſimmered away very gradually to the conſiſtency of an ointment, and applied *externally* to *cancer* (as recommended in ſome of our newſpapers;) is ſaid to have had a happy influence over an open devouring cancer in this neighbourhood. May not *oily* medicines, aided by the above named accompaniments, (and in particular by the *mucilage* of the gum and *the removal of coſtiveneſs*,) have their turn of trial in an *internal* form, in the caſe of cancer? And ſhould not many of thoſe *cancer-medicines*, which in modern trials have uniformly failed, ceaſe to be longer adminiſtered; as being *proved, in our hands, to be of all others the moſt hopeleſs* in general caſes?—Should difficulty occur in making the oils ſit eaſy upon certain ſtomachs, perhaps ſpermaceti may admit of being uſed in their ſtead; though it may be doubted in general how far an increaſe of the quantity of meat, broth, butter, and other ſuch animal ſubſtances, may be uſeful in caſes of ſchirrus and cancer. What would be the effect of *ſoap*, which is compoſed of oil and an alkali; in caſe it ſhould be ſufficiently mild, may deſerve a queſtion.

We are told of a *flux from the bowels* occurring to the Southward, which after a year or two, *terminates in conſumption*. My information on this ſubject is not from profeſſional perſons; but if ſuch a caſe occurs, and is owing to tubercles having *extended from the abdomen to the thorax*; may not a treatment be adopted

for it, which ſhall aim at the cure of tubercles? If this *plan* for the cure be reaſonable where every thing elſe is ſaid to fail, I cannot but hope that the above *methods for executing it*, may be borne in mind; as tubercles in many inſtances are made worſe by mercurial medicines, however they may ſeem benefited by them in other caſes.

May not oils, mucilage, and abſorbents, each be principles which may often be introduced with advantage into the human frame (conſidered as a maſs of organized matter); in order to act there nearly under their *original native forms?* Mucilage and abſorbents have each been employed in this view; as well as acids, aſtringents, and certain gaſſes; and oils perhaps may equally find ſuitable moments for their adoption. A near relation of mine, who lived on milk and vegetables to avoid the gout, having complained of a grating in the bones on the front of his cheſt; I recommended to him to make free uſe of butter with his bread; and the ſymptom ſoon diſappeared. Would not ſomething of this kind alſo be worthy of trial for joints which crack when they are moved; eſpecially as I think I have given advice of this ſort with ſucceſs, for this defect? Sinews alſo which have become rigid by accidents, as well as various other caſes, may perhaps afford room for the free introduction either of the oleaginous or mucilaginous principle, or both.—Hence, it may often become uſeful in practice, where caſtor oil is employed, occaſionally to increaſe its bulk by the addition of olive oil. But we muſt at all times remember, that every thing has its limits; and that oil eſpecially may tend to overload the ſtomach, if not the conſtitution. But theſe hints being ſufficient in a caſe, where I have nothing to propoſe but *looſe* conjectures, I reſume our general ſubject.

Of Meaſles generally conſidered.

I think it may ſafely be obſerved, that there are few inſtances of diſeaſes like the meaſles, which are *of ſuch magnitude when neglected;* and yet are commonly to be checked by *ſuch light*

meaſures in the commencement. A ſingle bleeding and a ſingle purge *early* adminiſtered, and repeated in caſe of need, with low diet, and pure and temperate air; have, with little or no exception, ſufficed in our climate and our ſituation, for the *common* form of this diſtemper. Nor does this method only cure the mild forms of the firſt diſeaſe; but (according to our experience in 1802) it *prevents* what are far more to be dreaded, namely, the *ſecondary* complaints. As a purge and a bleeding then cannot injure a common conſtitution, *neither of them ought ever to be ſpared*, as far as the cure demands them; which I believe will commonly be found to be within a ſmall extent. Some give a vomit on the firſt occurrence of meaſles*; and it perhaps may be uſeful in various points of view; but I have never ſeen this method extenſively practiſed; and ſome have even objected to it.

I ſhall not pretend to teach at large of the *nature* of meaſles.† I ſhall be content with aſſerting, that at firſt, the ſymptoms ſeem to be *inflammatory*; and that in violent caſes they go on to indicate *acrimony*; inſomuch that corroſion often follows the lancet and bliſter, and (if I remember right) the ſcratch and even the puſtule.

I think we ought not to be ſo confident, as Dr. Watſon appears to have been, that meaſles of the malignant kind are *putrid*, otherwiſe than as the reſult of acrimony; though his recommendation of the Peruvian bark for removing debility, where

* We read of the following general treatment of meaſles, at Edinburgh, in 1735 and 1736. "Moſt of the patients who were attended by our phyſicians and ſurgeons, were kept on the *cool* regimen all the time of this diſeaſe; and were let blood at, and *vomited* before the eruption; unleſs, where the preceding ſymptoms and fever were very mild." Medical Eſſays and Obſervations, 5, 27.—(The vomits, it may be recollected, would often act as purgatives.)

† What is the nature of the diſeaſe in the *hog*, called the meaſles?—Is not the animal full of tubercles within; and do not the ſpots ariſing from this, occaſion him to be called *meaſly*?—The internal ſtructure of the hog (as we know,) has conſiderable reſemblance to that of man.

the cheft is free, may at firſt ſight ſeem a proof in his favour. I believe however, that his obſervation is thoroughly juſt, that *purulent collections* of matter do not occur even in the worſt ſhape of meaſles. In their more malignant form, every thing tends to corroſion of the fleſh, to caries of the adjoining bones, and to ultimate general mortification.

Dr. Percival in the Spring and Summer of 1774, found the meaſles of the regular kind epidemic at Manchester, and gives the following particulars reſpecting them. He ſays, that "it was not unuſual for violent peripneumonic ſymptoms to occur five, ſix, or even eight days, after the diſappearance of the eruption. Under theſe circumſtances, bleeding, bliſters, and the ſeneca root, were found to be very efficacious remedies. I preſcribed (he adds) the *Peruvian bark* with great ſucceſs to many of my patients under the meaſles, combining it with *demulcents* and the *ſaline mixture*;* and premiſing veneſection, when the ſigns of inflammation were urgent. The practice of giving bark in this diſeaſe (he affirms) was firſt introduced by Dr. Cameron, a very eminent phyſician at Worceſter; who obſerved, that it prevents the *retroceſſion of the morbid acrimony*, and *continues* the efflorescence on the ſkin, ſometimes ſo long as the twelfth day. By this ſalutary operation the cough and other inflammatory ſymptoms are in a great meaſure obviated; and the patient is freed from all danger of a peripneumony, the fatality of which Sydenham deſcribes in ſuch ſtrong terms. It is *many years* (continues Dr. Percival) ſince I firſt *adopted* the method of cure recommended by Dr. Cameron; and experience has afforded me the fulleſt conviction of its ſafety and efficacy, in all ordinary caſes. During the late epidemic, not a ſingle inſtance occurred to me of the peripneumony ſuc-

* He gave 3 drachms of *ſalt of tartar* diſſolved by the moiſture of the air, having afterwards ſaturated it with lemon juice; alſo 2 ounces of weak cinnamon-water; half a drachm of paregoric elixir, and the like of antimonial wine; four ſcruples of extract of Peruvian bark, and the like of extract of *liquorice*; mixing the whole together.—How often this medicine was adminiſtered, is not related.

ceeding the meaſles, *when the bark had been employed*? But my aſſiſtance was deſired in the laſt ſtage of fifteen unfortunate caſes of this kind, in which the *common* antiphlogiſtic and pectoral courſe had been purſued. The meaſles, when violent in degree or ill treated, frequently lay the foundation of hectic fevers or pulmonic conſumptions.*"

Of courſe we cannot overlook in this account the mention of a demulcent (namely liquorice,) as well as of the neutral ſalts.—But what is ſuggeſted concerning the *Peruvian bark* is of more immediate intereſt. I do not mean as to the mere *hiſtory* of its application to caſes of this ſort; for here Dr. Percival is miſtaken. At the viſitation of the meaſles in Edinburgh, in 1735, and 1736, it is ſaid, that "to thoſe who ſeemed to be hectic, and to be threatened with a phthiſis after this diſeaſe; vomits, *Peruvian bark*, and aſſes *milk*, were of ſervice."† Dr. Whytt alſo employed the bark for *hoarſeneſs* after meaſles, in 1757, of which we ſhall ſoon ſay more; and Dr. Watſon uſed it more at large in this diſeaſe in 1763. But I think you will agree, that it is more uſeful to notice the ſuppoſed power of bark over the *eruption*, and the ſuppoſed power of the *eruption over the morbid acrimony*; than any other circumſtance in the account by Dr. Percival. This, if correctly ſtated and generally confirmed, may lead us to one mode of controlling both the primary and ſecondary diſeaſes of meaſles. It even induces us to aſk, in caſe the

* Medical Obſervations and Inquiries, London, 5. 283-285. Edition 1776.

† Medical Eſſays and Obſervations, Edinburgh, 5. 28. Fifth edition.—In the ſame volume p. 84,) we find a paper by the elder Dr. Monro, on the effect of the Peruvian bark in gangrenes, agues, and *ſmall pox*; which perhaps ſhows by what ſteps the bark firſt came to be applied to meaſles; namely, in order to fill the puſtules, improve the matter in them, and prevent mortification.

With the ſame view, Haller, in the caſe of black puſtules in the ſmall pox, ordered *camphor*; and his relation of its ſucceſs, even when the *urine had become green*, forms the moſt intereſting article in the *Pathological Obſervations* of this author. (See them tranſlated into Engliſh, and printed in London for Wilſon and Durham, in 1756.) Dr. Cullen, ſuppoſes the chief advantage of camphor, in confluent ſmall pox, to ariſe from its antiſeptic qualities.

morbid matter can be made to *expend itſelf in ſome degree* by means of the eruption; whether *ſevere* caſes of the primary diſeaſe, which happen in ſpite of proper treatment, may not occaſion the ſecondary diſeaſes to be leſs formidable than might otherwiſe be expected? As alſo, whether this inſidious diſtemper is not ſometimes more particularly to be feared in its milder forms, if neglected or miſmanaged. It is next in order to mention again, that Dr. Whytt found it advantageous to uſe the bark for the *hoarſeneſs* ſometimes ſucceeding meaſles; whether attended with cough, or otherwiſe. It was combined with vinegar, though probably without neceſſity.* The bark, joined with tincture of cantharides and opiates, has likewiſe often been found ſerviceable in the *hooping* cough; as opiates with bark and chalybeates, have alſo been employed ſucceſsfully in *other* coughs. Of courſe the *univerſal rule for all theſe caſes* is, to get rid in as great degree as poſſible, of the more formidable ſymptoms of inflammation, before the bark is admitted. The favourable operation of the bark here, is probably not ſo much owing to its ſpecific powers; as to its ſtimulating the powers of the conſtitution, or to its creating counter-actions ſufficient to balance the morbid powers of the diſeaſe. I muſt not quit the ſubject of the bark, without mentioning that Dr. Whytt uſed the bark for *dyſentery attended with aphthæ*; though he agreed with Cleghorn, that it did no ſervice where mortification had commenced.† This new application of bark has full relation to our general ſubject; not only becauſe dyſenteric ſymptoms, but (as we ſhall hereafter find) aphthæ, are frequently combined with meaſles. After all, the *beſt* mode of treating meaſles may perhaps be one, which ſhall have little to do with bark. Several plans in medicine have in their day met with applauſe, merely becauſe they were ſomewhat preferable to thoſe

* Eſſays and Obſervations, Phyſical and Literary, Edinburgh, Vol. 3. Art. 14. Edition 1771.

† Eſſays and Obſervations, Phyſical and Literary; as laſt cited.

which went before: and ſo it may poſſibly be with thoſe which include the exhibition of bark in meaſles. The ſubject therefore merits new attentions. Here however, I ſhall leave theſe particulars, to make another reference to Dr. Percival.

This amiable author (now no more) relates from the records of Manchester, in England, that in a period of ſix years, meaſles (contrary to ſmall-pox) were found moſt fatal to *males*. He ſays alſo, that in this period, the meaſles deſtroyed a number equal to about one *ſixth part* of the number deſtroyed by the ſmall-pox; and that one half of this loſs occurred with patients under *two years of age*.* With reſpect to the numbers loſt however, the Manchester records are probably deceitful; a part of the ſlaughter occaſioned by meaſles having been concealed under other names. If we believe Morton, this diſeaſe has ſometimes become a little plague in its more oſtenſible ſhape; and when comprehended under all its forms (primary and ſecondary,) it is truly a formidable ſcourge. Sydenham ſays of the cough, "after the meaſles go off, that it is ſo very fatal, that it may well be reckoned the chief miniſter of death; deſtroying *even more than the ſmall-pox*."† Happily ſome of theſe accounts ſurpaſs modern experience, at leaſt in the United States and in Great Britain.

For the cure of the *diarrhœa* in meaſles, Sydenham *(as I have ſuggeſted above)* chiefly relied upon the lancet; which, as is well known,) he boldly uſed with every patient in every ſtage of meaſles which *ſeemed to require it*: though in common meaſles, he ſays, that he generally was able by his methods to proceed without bleeding, in the firſt ſtages; an aſſertion to which we cannot refuſe a certain degree of credit. At Edinburgh, in 1735 and 1736, "if there was a diarrhœa (as we are told),

* Medical Obſervations and Enquiries, Vol. 5. p. 283, 288. 289.

† See Peachy's Tranſlation, p. 135, 5th Edition; which happens now to lie before me.

blood-letting, *vomits*, and the *decoctum album* generally put it away.*

Doctor Cullen will afford me ſome ſhort concluding quotations on the ſubject of meaſles.—He ſays, that "a diarrhœa frequently comes on (after the deſquamation of the eruption;) and continues for ſome time;" alſo, that "it is common for the meaſles when they have been of an inflammatory kind, to be followed by inflammatory affections, particularly ophthalmia and phthiſis:" and laſtly, that "for the *moſt part*, the meaſles even when violent, are without any putrid tendency; but in ſome caſes, ſuch a tendency appears."† My copy of the printed work of Dr. Cullen has marginal notes, made by myſelf in his lecture-room, in 1780 and 1781, while an attendant upon his lectures: and the notes ſtanding oppoſite to the above paſſages reſpectively, are as follows. "In the *laſt year's* courſe (of lectures) I find, that Dr. Cullen ſuppoſed the morbillous matter to have been determined to the mucous glands, (when the flux occurred.)" "If there is an acrid matter, he does not know how to evacuate (or correct) it; and therefore he attends to the inflammatory circumſtances." "As he never ſaw this putrid tendency, he has always treated the meaſles as an inflammatory affection." It appears probable from a review of theſe three paſſages and notes, that Dr. Cullen had in his mind Dr. Huxham's account of a "violent *mucous* diarrhœa" ſeen in meaſles; and as to the putrid form of the meaſles, he cites for his authority, the celebrated paper of Dr. Watſon above noticed. ‡

* See Medical Eſſays and Obſervations as above. 5. 27. The decoctum album conſiſted of a decoction of the roots of tormentil and *comfrey*, to which were added cinnamon, *calcined hartſhorn*, *pure chalk*, and white ſugar. (ſee James.)

† See Dr. Cullen's firſt lines of the Practice of Phyſic, Edition 1779, Vol. 2. p. 80. 81. See alſo, ſeveral paſſages in his Materia Medica.

‡ See Medical Obſervations and Inquiries, Vol 4. p. 132.—In the ſame volume is Dr. Dickſon's Vindication of Sydenham againſt Morton and Mead, on the ſubject of meaſles. Morton has certainly the bills of mortality and Sydenham's ſilence againſt him; but Morton does not ſpeak upon *hearſay*; but upon the *recollection* of what happened many years before he wrote.

It is needleſs to inſiſt here on the diſtinctions between the *benign* and *malignant* ſpecies of meaſles; though the ſmall-pox, the dyſentery, the ſcarlet fever attended with ſore throat, and perhaps various other diſeaſes, (even without including the venereal,) have each of them alſo *two forms;* which differ not only in degree, but in ſome reſpects in ſymptoms; according to conſtitution, ſeaſon, treatment, infection, and other circumſtances. Nor ſhall I pretend to detail the reſpective ſymptoms or treatment belonging to the two ſtages (anſwering to thoſe in the ſmall-pox,) which generally occur in ſevere, and often in the mild ſtate of *primary* meaſles; for here common authors muſt be conſulted, ſubject to what is above obſerved. But it is proper to notice, that meaſles even of the ſame ſpecies, under different circumſtances, manifeſt conſiderable variety; which muſt not only govern the practice of the phyſician, but alſo his judgment of the practice of others. On the whole, one who preſcribes for meaſles ſhould never loſe ſight of what Sydenham ſays, after having ſpoken of *ſmall-pox.* "If this be the true and exact hiſtory of the diſeaſe, (namely, ſmall-pox,) he deſerves to be blind, who will not ſee that the *whole event* of it, as to *either part*, depends on the foundation of the cure, well or ill laid at firſt."

This might ſeem the proper place to ſay a few words upon *ſecondary diſeaſes*, as allied to meaſles. But I ſhall combine the trifle which I have to note on this ſubject, with ſome other correſponding articles, in the diviſion of this letter which immediately follows.

Of connected or correſponding Diſeaſes.

Theſe are of ſeveral deſcriptions.

I. We have already noticed certain diſorders which frequently *follow* each other, by a fixed order in nature, in ſeparate individuals; without relation to other patients, and independent

in a great degree on the ſeaſons. Meaſles we have ſeen accuſed, as being the frequent parents of diſeaſes in the cheſt, eyes, and inteſtines. Small-pox is thought often to produce ſcrophula and other diſeaſes; or (to uſe the words of Haller) their troubleſome conſequences may be ulcers, inflammation of the eyes, weakneſs of the joints, looſeneſſes, or tedious diſeaſes of the lungs. Theſe are the moſt eminent among the many examples of primary diſeaſes leading to ſecondary ones. But ſecondary diſeaſes may ſometimes lead to a third claſs, or to *ternary* diſeaſes; for obſtruction or inflammation may occaſion ſchirrus, and ſchirrus may end in open ulcer; and if the obſtruction or inflammation in theſe caſes has been the ſequel of ſome prior acute diſeaſe, we ſhall then have *four* diſeaſes in lineal deſcent; with three periods of apparent health perhaps interpoſed.

The ſeveral diſeaſes reſulting from meaſles, are not only like the primary complaint itſelf, commonly either acrid or inflammatory; but, in ſome caſes, they are perhaps the conſequence of re-action. The ſmall-pox generates diſeaſes of a more mixed order; but they alſo are commonly either acrid or inflammatory. Sydenham, ſpeaking on this ſubject, ſays, "When the patient is upon the recovery, and the puſtules are fallen off and he has eaten fleſh a few days, (namely about the one and twentieth day,) I reckon he may be bled in the arm, *if the diſeaſe has been violent*; for the *inflammation which the ſmall-pox has impreſſed upon the blood* (whether the patient be old or young,) no leſs indicates blood-letting, than the filth that has been gathered together, does purging. This is evident enough, both from the *colour of the blood* that has been taken away after the ſmall-pox has been ſevere, (which is like that of pleuritics;) and alſo from thoſe great inflammations that fall on the *eyes* after this diſeaſe; as alſo from *other* ill effects of the blood overheated and depraved by this diſeaſe: which is the reaſon that they who were healthy all their lives before, do (that is many of them,) all their time after contend with *ſharp hot* humours falling on the lungs or ſome other part. But if the puſtules have been

few, there will be no need of bleeding. After bleeding, I give three or four purges. Moreover, when the patient has been freed a while from the confluent ſmall-pox, and riſes daily, it ſometimes ſo happens that he is cruelly troubled with a *ſwelling of his legs;* which either goes off of its own accord after bleeding and purging, or is eaſily aſſuaged by the uſe of diſcuſſing and emollient herbs boiled in milk."

II. Sydenham, and our own experience have made us acquainted with another form of connection between diſeaſes; I mean that, by which two diſeaſes of *independent* origin *influence* each other. Thus a departing epidemic acts upon a commencing one, and receives back its re-action; certain ſymptoms of each being modified by the other. An ordinary diſeaſe alſo has ſome of its characters changed by a cotemporary epidemic.

If it be ſaid, that a certain ſtate of the air influences in theſe caſes, it muſt ſtill be admitted that a paſt diſeaſe may have partially changed our bodies for a time; and that infection alſo, in ſpreading from one to another, may have *limited* effects upon certain individuals; which are conceſſions ſufficient for our purpoſe.

III. One *epidemic* in ſome caſes ſeems to go even to the length of generating others, making them partly cotemporary with itſelf, though perhaps in different ſets of patients; or elſe the ſame ſtate of the air or ſome other unknown circumſtance, has the power to produce related diſeaſes.

Of this I ſhall here offer ſeveral examples.—"In the firſt two months (ſays Sydenham) that this ſort of *meaſles* (in 1674) appeared, a *meaſly fever* here and there intervened, in which ſome pimples broke out in the trunk of the body (eſpecially in the neck and ſhoulders,) like the meaſles; but they were diſtinguiſhed from them, becauſe they did not ſeize the whole, being confined to thoſe parts we now mentioned. But the fever, though it was plainly of the ſame kind, was more violent, and continued fourteen days and ſometimes longer. It bore neither glyſ-

ters nor bleeding, being enraged by both; but the method for the meaſles agreed with it."*

At Edinburgh, in 1735 and 1736, we learn that "during the *meaſly ſeaſon*, ſeveral people who *never had had* the meaſles, had all the preceding ſymptoms of meaſles; which went off in a few days without any eruption, (which they underwent months or years afterwards.) Others who *had undergone* the meaſles formerly, had at this time a fever of the eryſipelatous kind, with eruptions like to what nettles cauſe; and all the previous and concomitant ſymptoms of meaſles from the beginning to the end of the diſeaſe."†

What is ſtated as ſometimes occurring in ſeaſons when the meaſles prevail, has its parallel in ſeaſons of the *ſmall-pox*. I begin as before with Sydenham, who writes thus. "At the time (1667) wherein the ſmall-pox firſt broke out, a new fever aroſe, not much unlike the ſmall-pox; if you except the *eruption* of the puſtules, and the ſymptoms which depend upon them. This fever did not ſeize near ſo many as the ſmall-pox, yet it continued as long. But in the winter, when *they decreaſed*, this prevailed; and when *they returned*, this receded: yet did it never quite ceaſe at theſe times; till at length in Auguſt, 1669, the ſmall-pox and this fever went off together."—The agreement between this fever and the ſmall-pox chiefly lay in a pain near the pit of the ſtomach, which manifeſted itſelf ſtrongly on preſſure; alſo in a natural ſalivation, and natural ſweats; in ſpots; and in the mode of treatment being common to both. Hence, Sydenham called the fever *variolous*. Sydenham even informs us, that a *third* diſeaſe accompanied theſe two epidemics, eſpecially during one ſummer, namely a looſeneſs; the conſtitution of the air inclining to a bloody flux: and he adds, that it was manifeſt, that this diſeaſe was nothing elſe but the fever turned *inwards upon the bowels*. In other words, he ſuppoſ-

* See Peachy's Tranſlation of Sydenham. Sect. 5. c. 3. p. 165.

† See Medical Eſſays and Obſervations. 5. 28. 29.

ed it owing to an inflammatory tendency conveyed, *through the meſenteric arteries*, to the inteſtines; there "ſoliciting excretions." It was cured by bleeding, and the cool regimen; and became mortal (he ſays) from the uſe of aſtringents, and even of rhubarb and other gentle cathartic.*

The following caſe from Haller is ſomewhat more equivocal than the preceding; but I ſhall give it, that I may have ſomething like a pretext for introducing an *intereſting note* from that author. In the Pathological Obſervations before cited, Haller, after informing us, that at Gottingen the diſtinct ſmall-pox began in March, which in the ſummer in many caſes became confluent; ſays, that in the month of September the diſeaſe began to decline, and gradually gave way to a *miliary fever*. He adds afterwards, that this fever "was in no ways dangerous. The diſeaſe was very gentle in the firſt day; and on the ſecond, large red *ſpots* appeared upon the ſkin. It ſeized equally thoſe who had *not had* the ſmall-pox, and thoſe who had *got over* them. On the third day, very ſmall tranſparent white *puſtules* began to ariſe gradually in the ſpots, (the circumference of which was pale;) but by a moderate perſpiration and a diet drink, without any other aſſiſtance from phyſic, all theſe diſappeared on the ſeventh day; and were ſucceeded by broad *dry ſcales* on the face, back, hands, and even in the mouth and tongue."†—So far Haller.

* See Peachy's Tranſlation, as above.

† Haller obſerving, that the ſmall-pox afterwards deceitfully returned with increaſed violence, and attended with ſtrangury, remarks as follows: "Was there not an *imperfect criſis* by puſtules; and [did not] the acrid matter, being reſorbed and carried to the kidneys, by its ſtimulus conſtrict the kidneys?"—The following curious paſſage then immediately terminates his paper: "But the variolous puſtules dig pits in the ſkin, ſo that the turgid arteries diſcharge *a tinged fluid* through the orifices of the ſmall cutaneous veſſels into the bottom of theſe pits; and I have ſeen the pus of ſo *inflammable* a nature, as to *burn very briſkly*. But I never met with puſtules in a dead body beyond the pharynx, in any of the viſcera. The *firm epidermis to confine* the pus, ſeems neceſſary, in order to the formation of the puſtules. But the inteſtines are uſually ſo much affected, as being ſoftened and in a manner macerated in the pus, they are very eaſily torn even by injection alone." [N. B. See Cruikſhanks as to the ſeat of the puſtule.]

Perhaps it may be worth remembering here, that there are many inſtances where the infectious matter of the ſmall-pox and kine-pox, applied to perſons who have before *paſſed through thoſe diſeaſes reſpectively*, has been capable of producing a repreſentation more or leſs perfect of certain of their ſymptoms.

IV. Another ſpecies of connection between diſeaſes is ſeen, when diſorders *intermix* with each other, in the ſame patient and in the ſame moment of time, by a certain alliance.—This may ſo happen, that one ſhall appear as the mere ſymptom of the other; as ſore eyes, and cough, and looſeneſs ſeem to be ſymptoms of the meaſles, during the primary diſeaſe of meaſles. Syphilis and gonorrhea alſo, if they be really diſtinct diſeaſes, are alſo in many caſes found blended with each other in the ſame patient.

V. The laſt connection, or here I ſhall rather call it *correſpondence*, which I ſhall mention between diſeaſes; is where one is *vicarious* with reſpect to another; that is, is of a nature to *repreſent and perform the offices of the other*. A more brilliant inſtance cannot be produced, than that of the ſubſtitution of the *kine-pox* for the *ſmall-pox*. The kine-pox poſſeſſes all thoſe ſecret influences upon our frame, by which it diſables us from receiving the ſmall-pox; in this, exactly imitating the ſmall-pox itſelf, which almoſt univerſally ſhuts the door againſt its own return, whenever it retreats from its viſitation of any individual; as if it had there deſtroyed the means and pabulum of its own exiſtence on every future occaſion.

And here let me be forgiven for expreſſing my admiration at the power of vaccination, (under our preſent notions at leaſt of its efficacy,) in ſecuring us from the ſmall-pox in all its forms. Inoculation of the ſmall-pox had already accompliſhed wonders of an inferior kind. It had turned the current of the ſmall-pox from the confined vitals, to the *open ſkin*; where the healing air has acceſs to the parts which are moſt affected; where the ravages of the diſeaſe, if they do occur, are leſs important, than

when falling upon the vitals; and where the matter of all the puſtules has a ready iſſue.*—But what vaccination propoſes to do, is far beyond this; eſpecially as it removes the mortality which inoculation itſelf ſpreads, in conſequence of its extending the infection in a natural form. The prevention of one ſerious diſeaſe by the inſtiction of another mild one, which is of itſelf borrowed from another race of animals, (inſtead of our retaining that ſerious diſeaſe to multiply its fatal likeneſs, and to introduce new caſes of calamity;) is a ſingularity hitherto not even looked for in medicine. It may perhaps be conſidered as a peculiarity on this occaſion, little leſs worthy of notice, that an attempt to extinguiſh a diſeaſe ſo lucrative to practitioners, as the ſmall-pox, ſhould have excited but little intrigue; that vanity alſo ſhould have called up only a few oppoſers; that few real difficulties ſhould have occurred to be ſolved reſpecting the progreſs or the management of the kine-pox; and that the knowledge of the inoculation for this new diſeaſe ſhould have ſpread itſelf more rapidly over the globe, than any other human invention. Perhaps in the end, we may find, that it is ſcarcely to be called a human invention; and that men have only been uſed as inſtruments reſpecting it. In the mean time, we are allowed to hope, that it will go on to juſtify itſelf as one of the firſt improvements in medical practice, as well in ſtatiſtical economy; at the ſame time that it offers a grateful ſafeguard to our private feelings. It would indeed be no diminution of the effective value of this meaſure, ſhould the ſmall-pox itſelf be ſuppoſed heretofore to have had *one and the ſame origin*

* I do not pretend to ſay, that the puſtules are generally found internally in ſmall-pox; for I know to the contrary; and perhaps puſtules may form one of the advantages of inoculation, eſpecially as their diſcharge is outward. But if the remark of Haller be true, reſpecting the ſtate of the inteſtines in the malignant form of ſmall-pox; charcoal, oxygenated air, and other materials, may be given by the mouth and by injections, to meet the variolous matter in the inteſtines; and a farther proportion of oxygen may be made to enter the ſyſtem through the lungs.

with the kine-pox; in ſhort, to be only a more formidable ſpecies of kine-pox attended with contagion; which in our day, is thus exchanged for a gentler form of it. The *wonder* of the caſe may ceaſe, but not the bleſſing. Perhaps ſo ſimple a repreſentation of the tranſaction as this, if generally received, might even extend the bleſſing; by reconciling every individual to a belief of the general truth in queſtion, and of the practical advantages to be drawn from it. In the mean time I cannot but remark, that to the Britiſh nation and their deſcendants, are owing the introduction of the *inoculation of the ſmall-pox and the kine-pox;* and the proper management of the two diſtempers.

I ſhall only remark farther on the ſubject of ſecondary diſeaſes, that as ſo many of them are enliſted in the train of the ſmall-pox; it may be wiſe, while our opportunities ſtill laſt for making diſſections of the dead in this diſeaſe, to purſue our obſervations on the ſubject. If the ſmall-pox ſhould finally yield to vaccination, the knowledge obtained may ſtill be uſeful; as all diſcoveries into nature have commonly more than one application.*

* Before diſmiſſing the ſubject of Sydenham and the ſmall-pox, let me mention, that when Sydenham is praiſed (as by Haller for example, for teaching the uſe of freſh air in this diſeaſe; the praiſe ſhould be meaſured. He diſcouraged heating medicines, heating diet, and heated rooms and beds; but he commonly ſhut up his patients out of the way of the *open air*, as ſoon as he diſcovered the diſeaſe. He even put them to *bed* on the fourth day of the eruption; though he was ſomewhat leſs ſtrict as to the bed in very hot weather, and likewiſe in the caſe of ſlight eruptions or of inflammatory habits. If delirium alſo occurred, he took the ſick a little while from their beds; and if they had ſtrangury, he had them led twice or thrice acroſs the room, having found this advantageous. But though he knew of many inſtances where a caſual riſing from the *bed*, and of ſome others where a caſual *expoſure to the air*, or the drinking of cold water, had led to cures in *deſperate* circumſtances; yet the benefit obtained in extreme caſes by extreme means, did not lead him to try the ſame or more moderate means in milder caſes. But notwithſtanding this, Sydenham, for ſagacity, candour, courage, and a ſenſe of the true duties of a phyſician, may ſerve as an univerſal model to his profeſſion; and the extent of his merit may well be learned from this ſingle circumſtance, that throughout his life he was under a conſtant neceſſity of appealing from his cotemporaries to poſterity, in favour of truth.

Of Inoculation for the Meaſles.

The beautiful practice of inoculation for the ſmall-pox, which was long employed in various parts of the eaſt, before it was even known either in Europe or America; has been imitated for ſeveral other diſeaſes in Europe; and, among the reſt, for the meaſles.

It is now nearly half a century, ſince Dr. Francis Home of Edinburgh propoſed this meaſure for meaſles. Dr. Percival ſays, that it was "practiſed in ſeveral inſtances with conſide-"rable ſucceſs; the ſoreneſs of the eyes being mitigated by "it, the cough abated, and the fever rendered leſs ſevere. Dr. "Home's method of communicating the infection was, by "applying (to an inciſion in each arm) cotton moiſtened with "the *blood* of a patient labouring under the meaſles. But the "morbillous matter (adds Dr. Percival) has ſince been en-"grafted, by means of lint, wet with the *tears* which flow "from the eyes in the *firſt* ſtage of this diſorder. It is to be "lamented (continues Dr. Percival,) that ſo little attention has "been paid to this valuable improvement of the healing art."* Dr. Underwood agrees, that report was favourable to what Dr. Home had done: and ſays that the practice ſeemed at one time to have been imitated in Sweden. Dr. Beddoes alſo appears to think well of it. But Dr. Underwood and Dr. Beddoes ſeem to admit, that it is now little attended to in Great Britain †

One reaſon perhaps of this general neglect is, that meaſles are chiefly contemplated by ſome, as only dangerous in their primary form; that by others, the fury of the firſt diſeaſe

* London Medical Obſervations and Inquiries, 5. 285-286, and Home's Medical Facts and Experiments.

† Underwood on the Diſeaſes of Children. 4th Edition. I. 297, and Medical Abſtracts. 4. 239. 4th Edition.

has been eaſily quelled, and the occurrence of the ſecondary diſeaſe eaſily prevented; and that meaſles do not, like the ſmall-pox, permanently deform the human countenance. If there are any ſtronger reaſons than theſe, for the diſuſe of the practice, they ought to be made known by thoſe who are poſſeſſed of them; otherwiſe the experiment ought to be reſumed.

Of Diſſections.

The only ſolid obſervations made in this letter, having been founded upon diſſections, it would be wrong to quit this ſubject without obſerving, that ſince the benefits to be derived from opening the bodies of thoſe who die of ſingular diſeaſes, is commonly evident; the privilege of doing it ſhould oftener be ſolicited. In our town, the indulgence is now ſeldom refuſed; as it is never ſought but upon critical occaſions, and is frequently attended with uſeful diſcoveries. When the ſurviving friends (in addition to the intereſt they take in the information obtained,) obſerve decorum, neatneſs, and a deſire to prevent trouble, in the operator; one diſſection commonly leads to another, even upon the ſuggeſtion of the friends of the deceaſed. This the more readily happens, as a few perſons of conſequence have led the way. Diſſections have alſo in general the advantage of calming the friends of the deceaſed, as to the *neceſſity of the death which has occurred;* eſpecially where the diſeaſe has been treated prudently, and by rule. A man of judgment at the ſame time will perceive, that the appearances in the dead body, however certainly they may point out the *immediate* cauſe of death, will have ſometimes proceeded from the errors of the practitioner, as well as from the primary diſeaſe. This reflection will ſeldom embarraſs a pretender; nor ought it to diſcourage a man anxious to improve, either himſelf, or his art, which is ſo neceſſary to mankind.

Before I quit this ſubject, I ſhall venture to hint, that a little *treatiſe on the art of diſſecting* ſeems a deſideratum in modern times. It is not merely neceſſary to learn how to prepare the head, the thorax, or the abdomen for diſſection; which is all that is taught on this ſubject by Mr. Benjamin Bell. The young practitioner ought to know (what is not always taught even by anatomiſts;) I mean, the general ſize, form, weight, colour, conſiſtence, and habit of each organ, in *a ſtate of health*, according to age and to ſex; and all this ſhould appear within the compaſs of a ſmall number of pages. The practitioner ought to be informed too what diſeaſes are related to each other; what parts have concern in each diſeaſe; and under what form each diſeaſe operates upon each part. I have ſeen a diſſector ignorant of the moſt ſimple things; when the propoſed treatiſe, conſulted even while he had the knife in his hand, might have informed him. Much may be learned in the examination of the dead, without delicate ſkill or profound knowledge; and phyſicians, apothecaries, and curious perſons poſſeſſed only of a ſlight knowledge of anatomy, might ſoon be qualified to perform many uſeful *inſpections of the dead.* The knowledge of the ſeats and of the internal effects of diſeaſes, would thus be perfecting itſelf, by means more extenſive than any now employed; and the knife, inſtead of chiefly inſtructing the mere anatomiſt and ſurgeon, would enlighten the perſon, who after all, *has moſt to do with the human body*, namely, the phyſician.

One chapter ought to be devoted to diſeaſed appearances; as aneuriſms, hydatids, polypi, calculi of different kinds, tubercles, ſchirrus, and cancer. And with reſpect to cancer, I think the work of Mr. Adams on cancerous breaſts deſerves conſultation, as exhibiting hints which require to be further examined.

Another chapter may be given to an enumeration of the points proper for the diſſector to notice, in the written account of his diſſections. And here Dr. Stark's mode of *comparing*

the ſymptoms with the morbid appearances, is much to be commended; and Dr. Baillie likewiſe has done well in generalizing the accounts of the ſymptoms. If the method of treatment uſed could alſo be given, and given with accuracy and candour, it might ſafely be recommended.

A third chapter may detail the *preparatory* meaſures to be taken in every diſſection; and they are very few.

A fourth may include the ſteps neceſſary to ſecure the operator from danger in critical caſes. It has happened to me, as it doubtleſs has to you, to have had ſeveral of my acquaintance die or become dangerouſly ill, from the infection conveyed by the puncture of the diſſecting knife, or the effluvia from a dead body. As I am not of the profeſſion, but merely *amicus curiæ*, I may with propriety teſtify, that a zealous practitioner among the ſick and dead, runs more hazards to his health and life, than he has credit for; and has therefore to add theſe to his other claims for remuneration. No profeſſions, however generally ſpeaking, are worſe rewarded than thoſe of the medical practitioner, the clergyman, and the ſchool-maſter, as far as depends on voluntary pay; ſo careleſs, in appearance, are we of our bodies and ſouls, and the improvement of our intellect.

If the plan above recommended were ſenſibly purſued, I think a few engravings would be added, conſiſting almoſt ſolely of *outlines*.* The parts might firſt be ſhewn *in ſitu*, and afterwards ſome of them might be given in different ſections or layers; and ſome of them might be exhibited ſeparately, as the inteſtines; (which might be ſhewn firſt in one extended line, with their membranous attachments;) and then convoluted; with letters ſerving for reciprocal references between the

* If more than outlines be given, and colours be rejected, the parts may be diſtinguiſhed from each other by the interchange of etching, ſcraping, dots, and lines in the copper-plates.

two.) Indeed I may say here, that in order to aid surgical *operations on the living*, there are many cases where transverse and other sections of parts, as of the limbs, might very usefully be exhibited,

The two Hunters used to boast, that when they began their lectures in London, there were few towns in England, where practitioners resided, who were able to describe a case, or a dissection; but that as they proceeded, the number of these so increased, that there were few towns where one or more did not reside, capable of managing on these occasions in a respectable manner.

The same progress is now taking place in part of the United States; and the little work proposed, would considerably add to its rapidity.

We may be the more anxious, for some measures on these subjects, as by submitting *select* cases to dissection, we should perpetually obtain fresh knowledge. Upon this principle, I have myself seen no dissection from which I have not learned considerably; for, to use the remark of Sterne, *an ounce of a man's own sense*, is worth a ton of other people's.*

Conclusion.

But it is time, my dear Sir, to resign you to Mr. Quier; whose piece on measles will be found among the "*Letters and Essays, by different practitioners;*" published by Dr. Donald Monro, in 1778. These letters and essays were printed in a thin 8vo. volume for Murray in London, and Elliot in Edinburgh; the chief of them having been originally designed for a third

* Since this letter was written, I have been present at a dissection, the account of which I shall give at the end of Mr. Quier's paper; as furnishing an example of the uses of dissection, and of a case of dependent disease.

volume of the Medical Tranſactions of the College of Phyſicians in London.*

Mr. Quier ſeems to have been a man of ſome abilities; and his paper in oppoſition to Sir George Baker and others, as to the origin of the dry belly-ache of the Weſt Indies, may be given in evidence of it. At the ſame time it muſt be acknowledged, that Mr. Quier preſcribed a raſh doſe of white vitriol in one caſe of his practice, which (if there be no error in his account) probably haſtened the death of his patient.

With reſpect to his little treatiſe on meaſles annexed to this letter, it contains two particulars much to my purpoſe. The one is, that he divides the Jamaica meaſles univerſally into two ſtates; the *feveriſh* and the *dyſenteric*; though with him, the one ſtate follows upon the other without the interval which occurred with us. The other particular is, that his patients retained an inflammatory habit of body for ſome months after the meaſles had terminated; in which I believe it agrees with meaſles in moſt other ſituations. Whatever differences, however, there may be found, either in kind or degree, between the meaſles of Jamaica and other countries, it is proper to become acquainted with them. Symptoms may be elucidated by being exhibited in their more ſtriking forms, or even by their occaſional abſence; new general rules may be pointed out, and old ones may be corrected, by the ſame means; and analogy (as we have more than once hinted) may thus lead to new modes of treating certain other diſeaſes.

As to my own portion of the materials of the preſent communication, I conſider it as offering nothing except as to the diſſections, which *does not require to be varified.* Much of the preſent letter has indeed profeſſedly conſiſted of mere queries

* It is from the ſame collection that I obtained Dr. Hume's extract from the Inaugural Theſis of Dr. Mackittrick Adair, pronounced at Edinburgh in 1766; a theſis not to be found among thoſe publiſhed by Smellie and Webſter.

and conjectures, which may of course prove of a very fugitive nature; but, under the doubting shape which has been given to them, I trust they will do no harm, and may tend to useful inquiry; in which view alone I propose them.

Should any part of what has here been suggested or collected, have the good effect, my dear sir, of exciting *you* to apply your original and happy turn of thinking, and your extensive experience and reading, to the subjects to which it relates; I shall certainly not regret *my* trouble. Highly important indeed is the principal object of the inquiry; since you must readily agree, that besides the deaths from the primary state of measles, it is probable that many deaths arise out of the *consequences* of this disease, which are not placed to its account in the ordinary bills of mortality.

I am, my dear sir,
Yours affectionately,
And respectfully,

DR. BENJAMIN RUSH.

An Attempt to explain, why more Children live that are born at the seventh, than at the eighth Month of Pregnancy. By DR. WILLIAM DEWEES.

IT is an observation as old as Hippocrates, that children born at the eighth month of pregnancy, are not so viable as those born at the seventh. This opinion has almost universally obtained credence, without, as far as I know, any rational explanation being given of it. Hippocrates has attempted it by saying, that at seven months the child naturally makes an effort to deliver itself, in which if it failed, it again attempted at the eighth month, and should it succeed, it came into the world weak and infirm, from having exhausted itself by these efforts. This hypothesis

is scarcely worthy a refutation, since, agreeably to this principle a child at full time, ought to be still more enfeebled, as now it has made three attempts at escape. Nor is the opinion of Pythagoras, that, the number eight, is less fortunate than that of seven or nine, more rational or satisfactory.

Those who have controverted this point, have not been more fortunate than their opponents; since they have rested the whole merit of their defence on a single circumstance of the child, (namely, because it has tarried a month longer in the womb, it must be more perfected, consequently more likely to live) without ever adverting to the contingencies of the uterus or labour at this period of gestation.

I therefore conceive this opinion of Hippocrates just, with this explanation; that a child at eight months is not less viable than the one at seven; but that its chance for life is diminished, owing to particular circumstances influencing the uterus and birth of the child. For agreeably to observation, we find many seven months children reared, but very few of those of eight months. Let us inquire to what circumstances this may be owing. I believe them to be connected only with the uterus, and entirely independent of the child itself.

These circumstances are, first, to a greater power and disposition in the body and fundus of the uterus, to contract and throw off its contents, at the period of seven, than at that of the eighth month; secondly, on the neck of the uterus being at this period more powerfully constrained to relax or yield to these contractions.

That the body and fundus are more disposed, or more violently induced to contract at this time, I infer, from their being now stretched to the greatest limits they can bear with impunity; and when thus stretched are stimulated to contraction: this contraction is manifest to the touch if the finger be introduced through the os tincæ. They have now also, a difficulty to overcome which is essential to the further progress of gestation, which is the resistance the neck makes to developement, and it

is well known the uterus contracts in proportion to the obstacles which oppose it.

Until the seventh month, the body and fundus afford almost exclusively the necessary room for the continually increasing ovum;* this happens from, First, the germ being deposited within their cavity, and consequently acting immediately on their fibres, which it distracts in all directions, but more especially in their longitudinal: Secondly, to these fibres being longer and more lax than those which compose the neck; the former therefore, opposes but little to the ovum, whereas the latter does a great deal. This is a wise provision of nature, otherwise abortion would always take place.

But this disposition to distention has its limits;—and the resistance of the neck cannot be maintained beyond a certain period; this period is when the body and fundus are thoroughly developed, which happens for the most part at the seventh month. These parts now refuse, or cannot, without injury or pain, be stretched any farther; they will consequently contract from the stimulus of distention; the influence of this contraction must be felt somewhere, and this where there is the least resistance; and this will be at the neck of the uterus, which will not only be passive, but open to a certain extent, and over the aperture of the pelvis; while the body and fundus are not only in a state of action, but are defended and supported by the abdominal muscles, &c. This resistance and action of the upper parts of the uterus continuing, and their contents augmenting, constrains the neck to develope, as its resistance is only passive.† By this arrangement the neck of the uterus after the seventh month, is obliged to afford all the room necessary for the future increase of the fœtus, &c.

From the balance of power being now in favour of the body and fundus, and this being exerted on the neck; it fol-

* Baudelocque, Denman, &c. † Baudelocque.

lows, it must either yield, or the uterus must rupture; but as the uterus never has been ruptured in this way, we have a right to infer, that there is a disposition in this part to expand when acted upon by them. Now, should this disposition be greater than ordinary, or in other words, should the resistance be inferior to the action it has to counteract, the whole neck will be speedily developed and the fœtus will escape through it without difficulty or danger; and that this disposition, or rather obligation to unfold is greater at this period than at any other, is rendered probable; first, from not only the contractions of the body and fundus being stronger; but being more powerfully felt from their being new, and consequently the parts opposing them more influenced by them; and secondly, from a partial distraction of their fibres having been effected by these efforts, the neck is irritated, and such is the economy of these parts, that when this happens the contractions of the fundus and body are more powerfully and more frequently renewed from sympathy, so that the neck is indirectly concerned in its own distention.

That the power of the fundus and body is greater both positively and relatively at this period, than at any other, I conclude, first (positively) from their fibres being but lately stretched to their greatest extent, and of course their strength not diminished as it afterwards is by the long continuance of this state; and secondly, (relatively) from resistance being now given to the farther developement of the fœtus, they are powerfully stimulated by its continual augmentation, and contract in proportion to the exciting cause.

We need not therefore be surprised that abortions frequently happen at this period; for the neck now is to furnish the whole of the required room for the increasing bulk of the ovum: it is therefore constrained, by the powers just mentioned, to unfold; which if it does in a just proportion, no evil will ensue; but should this not be the case, and it should yield too readily, premature birth will be the consequence.

Therefore should the neck of the uterus withstand the influence of the body and fundus after their first efforts are manifested, the presumption is, it will resist it, to the full period of gestation.

Three causes co-operate to this end; first, the contractile power of the fundus and body will rather be weakened from long distention, and in some measure from their becoming accustomed to its stimulus; secondly, to this stimulus being rather diminished now, since the ovum does not increase as rapidly as formerly, and to more room being allowed for that increase by the augmentation of the neck; and thirdly, to the neck being now less passive; for as it is forced to develope, or augment in width, it becomes incorporated with the body and acts with it, so that when contraction is excited, all the fibres act at one and the same time, and such is the nature of this contraction at the eighth month and at after periods, that it tends to shut the mouth of the uterus; and hence we see at this period very few spontaneous premature births.

For the reasons just assigned, there is no time of gestation at which the uterus yields so unwillingly as at the eighth month; and this emphatically accounts for the observation, that eight months children do not so frequently live as those of seven; for we find that at seven months the mouth of the uterus will yield to the internal agents sometimes very readily, consequently the child does not suffer the evils of a long and protracted labour, nor the influence of external agents: whereas at the eighth month, it almost always requires the concurrence of external causes or violence to throw the uterus into contractions; hence, children of this period seldom live, for they have not only to contend with all the violence that may be offered externally which is capable of producing uterine contraction, but also, with all the accidents that may arise from a severe and protracted labour, as well as to their being ushered into the world before their final uterine developement: we need not wonder therefore so few survive these evils.

A great variety of instances might be adduced to prove the safety and frequency of abortions at the seventh month; Van Sweiten mentions several:* La Motte† also furnishes them; he not only tells us of its happening more than once to the same woman, but also to her daughters, so that with them it appeared constitutional. I myself know a lady who has been delivered five different times at the seventh month or very little more, all of which children, (with one exception) are now living and healthy.

Mauriceau,‡ however, opposes this opinion; he says children born at the seventh month very rarely live beyond 15 days. To reconcile these different sentiments is perhaps not very difficult, as I conceive very much will depend on the opinion the accoucheur or midwife may have, of their chance to live. For it can very readily be imagined that very little attention will be paid, where such strict duties are required, if it is pre-supposed those attentions will be un-availing or thrown away; while on the other hand we can readily believe that many may survive, who have that care bestowed upon them, their delicate frames require. Thus we see of how much importance a preconceived opinion may be, and what different results may follow from the same premises.

It would certainly be erring on the right side to suppose, that all children born alive after the fifth month may, by proper attention be reared; and that we should never remit in our exertions and care towards them, however unpromising our reward may be. We have instances upon record of children at five months being raised to manhood and old age. Thus we are told that Fortunius Licetus§ was an abortion of the fifth month, in consequence of a severe fright his mother received from a

* Comment. § 1310.

† Traitè des Accouch. liv. I. chap. 28. p. 122.

‡ Liv. II. chap. 2. p. 204 and 205.

§ Baillie Jugem. des Scavants, tom. V. part. I. p. 239.

ſtorm: when he came into the world he was no bigger than the palm of one's hand. His father, a phyſician, cheriſhed his little body with great care by means of a furnace heated to a proper temperature by artificial means, (after the Egyptian method of hatching eggs,) and alſo inſtructed the nurſe in the proper mode of nouriſhing it. He had the good fortune to reap the fruit of his diligent ſolicitude and care, by his growing up to manhood, and becoming famous for many works of erudition; he lived to nearly the age of four-ſcore. Another inſtance may be given not leſs extraordinary, and of more recent occurrence.* "A fœtus at five months of pregnancy was delivered alive, but puny and weak to exceſs; it did not cry, and ſeemed hardly able to breathe; its eyes were cloſed, the limbs flabby and relaxed; ſome little motion, and the warmth of its body were the only ſigns of life it exhibited. It was wrapped up in ſoft linen, and ſupported by a proper degree of heat; a little luke-warm milk was given it drop by drop; this it ſwallowed; it continued preciſely in this way for four months; its motions were very inconſiderable, and it uttered no cry; it voided no excrements. At the expiration of the four months, it began to cry, to void excrements, to move its body, to ſuck, and to grow like other children; ſo that at the end of 16 months, it exceeded in ſize ordinary children of that age."

Theſe inſtances prove to us how careful we ought to be in pronouncing weak fœtuſes not viable. It would indeed be a good rule to treat all ſuch children as though there was a certainty of their living; nay, this appears an indiſpenſable duty, ſince we have no right to withhold our attention, however tedious or fatiguing it may be, becauſe many have died who were delivered at this period. The anxious ſolicitude of ſome patients has reſcued many poor little unfortunates from an untimely grave: if then our affection prompts us to exertions of this kind, humanity and duty ought ſurely to have equal claim.

* Brouzet. Eſſai ſur l'Education Medic. &c.

I am at this time attending a little creature now a month old, that was born at little more than the ſixth month. When it came into the world, the little noiſe it made did not amount to a cry, but it ſtirred its little limbs with conſiderable vigour, and after a few days was enabled to take ſufficiently of whey ſweetened with loaf ſugar, to nouriſh its feeble frame; it now ſucks its mother frequently during the day and night, has regular evacuations, cries audibly, and promiſes fair to be reared without much more than ordinary trouble.

Thus I have related inſtances of children living, that were born at the 7th month, and even at a much earlier period; but am not able to give any one, from authors, that was born at the eighth month. What has occurred in my own practice, goes to ſupport what I have already advanced, that children born at the eighth month, more rarely live than thoſe born at the ſeventh.—I know but of three inſtances of children living that were born at the eighth month, and theſe three were from the ſame lady, who habitually was delivered at this period: her labours came on ſpontaneouſly, advanced favourably, and were ſpeedily terminated. All other caſes of labour, *that I have ſeen at this period*, were preceded by more or leſs of external violence, or frights; the uterus was therefore ſurpriſed (if I may uſe the expreſſion) into contraction, and therefore performed its duties irregularly and with reluctance. The os tincæ now not only yields leſs willingly, (from whatever cauſe) but the increaſed volume of the child, offers more reſiſtance to its paſſage; the union of theſe cauſes protracts the labour to a conſiderable period, ſo that the child either periſhes before it is born, or elſe is expelled ſo very much exhauſted, that it ſurvives its birth but a ſhort time.

From what has been ſaid, I think we may ſafely draw the following concluſions: Firſt, that children born at the ſeventh month, have, from the contingencies mentioned, a better chance of life than thoſe born at the eighth month. Secondly,

that children born at the eighth month, though more viable strictly speaking, yet from the circumstances of labour at that period, are more exposed to danger than those at the seventh, and hence their diminished chance of life. Thirdly, that of those children born at the eighth month and those of the seventh (cæteris paribus,) more of the former would live, than of the latter. Fourthly, but from the nature and physiology of the uterus itself, there ever will be more seven-months children reared, than of eight.

Philadelphia, Jan. 8th, 1805.

An Account of a Case of Wounded Brain. By JOHN SYNG DORSEY, M. D.

Arch street, 20th November 1805.

DEAR SIR,

IN compliance with my promise, I send you a short account of a case of injured brain; should you think it sufficiently important to be made public; you will, by assigning to it a place in the Medical Museum, gratify

Your friend and servant,

J. S. DORSEY.

DR. J. R. COXE.

On the 19th October, 1805, I was requested to visit in consultation with Dr. Gardner of Derby, a boy aged about twelve years, who in the morning had received a severe blow from the hoof of a horse. As he was seven miles from the city, I did not

see him, until six hours after the accident had happened. I was informed that he was stunned by the blow, but soon recovering, rose upon his feet and walked; he had not however proceeded far, before he became sick, and fell. He was taken up and carried into the house, which was but a short distance from the place where the accident occurred. A wound was observed upon the back part of the head, just above the left ear, from which some blood flowed, but the quantity lost was inconsiderable.—When he was put into bed he became sick, and vomited twice.

At six, in the evening, I saw him, and found him free from pain, nausea, and coma: he was lively and did not appear to have suffered much. His pulse was somewhat depressed. Upon examining the head, a wound, an inch and a half long, situated about an inch from the lambdoidal suture anteriorly, exposed to view a large and very deep indentation of the skull—the bone was not thicker than the pasteboard used to cover books, and a considerable portion of it was beat in half an inch below the remaining unbroken portion, so that it was easy to introduce the finger between the skull and dura mater at this part. Notwithstanding all this injury, there was no nausea, no affection of mind, and very little apparent disturbance to the functions of the patient: there seemed, however, no propriety in suffering the bone to remain depressed, as in all probability, it would have occasioned dreadful consequences.

A free incision was made through the scalp, enlarging very considerably the original wound. The posterior and inferior part of the parietal bone was found broken in pieces, and pressed upon the brain. As there was no opening large enough to admit an instrument to remove the depressed pieces, it became necessary to apply the crown of a trephine to the solid part of the skull. It was applied as near as possible to the fracture, and a segment of bone was removed, forming rather more than a semicircle. This opening enabled me to introduce

the levator and to raiſe the depreſſed pieces, to their proper level. A fragment of bone very ſharp, two-thirds of an inch long, had been forced through the dura mater, and was found imbedded in the brain; a ſmall portion of it projecting upwards, was ſeized with a pair of forceps; and when it was removed a conſiderable diſcharge of blood followed, but a doſſil of lint put an end to the hemorrhage: a ſoft, light poultice was applied, and an abſtinence enjoined from all food, excepting toaſt and water. Dr. Gardner concurred fully in the propriety of copious depletion, and conducted the patient to a complete and ſpeedy cure. The wound healed without difficulty, and the patient now enjoys good health.

The inſtances of recovery from wounds of the dura mater are ſufficiently rare, to warrant us in recording every encouraging caſe.

Account of two Albinos. By Dr. John Vaughan.

Wilmington, (Del.) Oct. 26th, 1805.

Sir,

Lusus naturæ, or, the apparent ſportings of nature, are not only ſo afflicting in ſhape, but ſo equivocal in kind, as to demand the attention of phyſicians. Man is not only "fearfully and wonderfully made" in general, but ſometimes grievouſly and *wonderfully* deformed; hence it is our duty to record, and as far as is practicable, to examine, every deviation from the ordinary courſe of things, in the hope of finally remedying the incidental evils of our nature.

I had for ſome time attended to the progreſs of two caſes of albinos, that exiſt in this borough, and was examining into the hiſtories and ſuppoſed nature of the deformity, when the

receipt of the ſecond number of the Medical Muſeum, put an end to the inquiry, by anticipating the opinions of ſeveral phyſiologiſts on the ſubject: it, however, may be uſeful to add theſe caſes to thoſe already publiſhed.

The albinos are the children of reſpectable parents, without any evident deformity or hereditary taint. Their two firſt children are perfect—the third child and firſt albino, is now four years of age, and a healthy active boy. The firſt peculiarity obſerved in his caſe, was, what the parents termed "a red ſtreak acroſs the ſight of each eye," but which probably was a ſhade of redneſs from the iris; and in the latter part of the month, this redneſs diſappeared, and a quivering motion of the eyes occurred. It was doubted by the parents, whether the child could ſee or not, but as he grew it proved to be the common defect of an albino; and when he began to go about the houſe, he uniformly ſhunned the ſun-ſhine, nearly cloſing the eyes in a clear light, but in cloudy weather and from ſun-ſet until dark he was merry and playful as any of his companions. As he grows his eyes become ſtronger and their vibratory motions leſſen.

The fourth ſon, and ſecond albino, is now two years of age, and in every reſpect ſimilar to the preceding. The only apparent defects in the eyes of theſe children, are their perpetual vibratory motions, and large pupils. The iris is grey, and not, as is more common with albinos, red; and their complexion is pallid, and hair of a light colour.

The varieties obſervable in the albino perplex inquiry not a little. The caſes mentioned by Mr. Jefferſon, are the only ones which I recollect, of a vibratory motion of the eyes. Such was not the caſe with the famous boys of Chamouni, nor with many others on record; though in the caſes of the ſubjects of this letter, the motions of the eyes are ſo rapid and perpetual that an obſerver might reaſonably ſuppoſe viſion to be altogether precluded.

The "ſtreak" of redneſs obſerved in the month, and which diſappeared when the vibratory motion of the eyes took place,

is a phenomenon not mentioned in any history, that I have seen. I have supposed it to be owing to a primary shade of redness in the iris, which disappeared when the vibratory motion commenced. This, however, is mere conjecture.

The deformity is, in these cases, evidently accidental. The two previous children were free from any thing of the kind; and from an extensive knowledge of the relatives, there is no reason to suppose an hereditary taint.

If, as Mr. Buzzi supposes, an inordinate appetite for milk, will produce this mal-conformation of the eye, a query arises, whether it be the excessive use of milk during uterine-gestation, or the untoward consequence of inordinate desire, merely? If the former, this would be a common deformity in dairy countries; and if the latter, it will add a new blemish to the *direful* catalogue of nevæ maternæ! It would have been rational in Mr. Buzzi to impute an unnatural and inexplicable event to any equally unnatural cause; but it is much to be doubted, whether the supposed cause, in this case, bears any sort of relationship to the nature or degree of the event—I cannot but doubt both.

JOHN VAUGHAN.

Dr. John Redman Coxe.

History of a Case of Introsusception. By William Shaw, M. D.

Philadelphia, Nov. 1st, 1805.

Dear Sir,

I HAND you the history of a very singular case of introsusception, which you may give a place in your Museum, if you should think it worthy of publication.

J. A. became a patient of mine some time ago; he had fever with slight paralysis of his lower extremities; for which he was bled and had a mild cathartic given him, and this was repeated on the third day: his diet was ordered to be mild and nutritive. At the end of ten days he appeared so far recovered as to require no more medical assistance.

A few days after he was seized with diarrhœa; he did not make known his complaint until the seventh day. By this time he was very much reduced, but by the operation of a little castor oil followed by a mild astringent medicine, his diarrhœa was stopped about the end of the third or fourth day, when his appetite began to return, and his strength seemingly to increase.

Four days had elapsed when the paralysis of his lower extremities returned, accompanied with sickness at his stomach, which sometimes amounted to vomiting; feeble and irregular pulse, with his countenance very much dejected; he said he felt as if his bowels were turning from one side of his body to the other, and sometimes they seemed to move from below upwards, so as to affect his breathing; all this time he complained of very severe pain. He was ordered a dose of laudanum (it being late in the evening): next morning he died. I opened the body soon after death; the contents of the thorax were in a healthy state: upon opening the abdomen, I found the stomach, duodenum, and about half of the jejunum very much distended with wind, the other part of the jejunum was filled, or nearly so, with more than half of the ilium next to it. At the commencement of this introsusception, a stricture existed which nearly closed the intestine: three other strictures were found in the lower portion of ilium; and at each of those strictures a portion of intestine below, was received into that immediately above, one of about six, one of four, and a third of two inches. The whole of the small intestines showed a high degree of inflammation to have existed before death, and a part of the largest in-

trosusception was already in a gangrenous state. The received portion of intestine was very readily withdrawn from the receiving.

Would not the surgeon be warranted in attempting an operation for the cure of this disease where the symptoms so plainly evinced its existence as in the above case? There can be but two material objections urged against the operation, viz. the fallacy of symptoms in diseases, and the fear of subsequent inflammation from exposure of the contents of the abdomen, during the operation, to the influence of the air. The first ought always to be a serious objection while any doubts remained of the presence of the disease—the second ought not to operate one minute as an objection after the first was removed, and the common means proved ineffectual. We have many instances where, in consequence of wounds, the contents of the abdomen have been exposed for a length of time much greater than would be required for performing the proposed operation, and yet the persons have recovered. One of those dreadful cases, came within my knowledge: the man received a wound in the abdomen by falling on a sharp instrument which passed into the cavity and let out a portion of intestine; he afterwards walked about three miles with the intestine in his hand, and by having the necessary means used, recovered in a reasonable time.

Yours, &c.

WILLIAM SHAW.

Dr. John Redman Coxe.

Account of two Cases of Stricture of the Urethra, removed by Tobacco Bougies. By William Shaw, M. D.

Philadelphia, Nov. 1st. 1805.

Dear Sir,

THE following is the result of two experiments which I made with the nicotiana tabacum in the cure of strictures of the urethra. It is too well known to surgeons, that the disease in question often baffles every attempt to remove it; and I am of opinion that every fact relative to the cure of so painful and so distressing a disease should be made known. If publishing the history of those experiments, should be the means of giving relief in a single instance, I shall feel myself amply rewarded for the time I have spent in copying them from my notes.

T. B. laboured under a stricture of the urethra seated near the prostate gland about nine months. This disease owed its origin to an improperly treated gonorrhœa.

It would be too tedious to relate minutely all the different methods that were employed to remove it: Suffice it to say, that many trials were made with the common bougie; the gum-elastic catheter, &c. blood-letting general and local, blistering on the perinæum, several courses of mercury, all the routine of diuretics, &c. and a spare diet: as a last resource the caustic was proposed by my worthy friend Doctor Physick; but previous to the trial with the caustic, I was induced, from having frequently evidenced the very powerfully relaxing effects of the nicotiana in the cure of spasmodic diseases, to make the following experiment, viz.

A small-sized bougie was procured, around which I wrapped a thin smooth leaf of strong tobacco, previously moistened with water, so as to enable me to give it a degree of smoothness, that it might with more ease pass into the urethra. My bougie being first moistened in a decoction of tobacco, was very gently introduced into the urethra down to the stricture, where it was kept moderately pressed against it for the space of about fifteen minutes, when it passed the stricture and went into the bladder: at this time my patient complained of sickness at his stomach, and although it was in the coldest season of the year, a considerable moisture appeared on his forehead; immediately after the bougie was withdrawn he discharged upwards of half a pint of urine, which flowed in a natural stream: the bougie was introduced twice afterwards the same day, and repeated daily for two or three days, without the least difficulty: he has continued free from the disease ever since.

The success I met with in the above case, led me to make trial of my bougie, with a small improvement, in a second and very similar case which occurred to me a short time after—This was an elderly man who had by times suffered greatly from a stricture which existed about the commencement of the bulb of the urethra. This case had been treated in every respect similar to the foregoing, and with no better success. I made an extract of nicotiana and covered a small bougie with it, and having rendered it smooth, I moistened it in some of the same extract liquified by the addition of water: I made an attempt to introduce it into the urethra, which succeeded after a few minutes gentle pressure with the point against the membrane, which formed the stricture; a similar sensation of sickness and debility took place in this as in the other case, while the bougie was in the penis; the operation was repeated two or three times after this, which produced such torpor and relaxation of the sphincter vesicæ as to render him incapable of retaining his urine; however,

this inconvenience was removed, by taking a few drops of the tr. canthar. About six months after, I saw my patient, when he informed me that he had remained entirely free from every symptom of the disease, during that time.

Yours, &c.

WILLIAM SHAW.

DR. JOHN REDMAN COXE.

On the Effect of Fear in Dropsy. Communicated to DR. RAMSAY, *Charlestown, (S. C.) by* PAUL HAMILTON, *and transmitted to the Editor, by* DR. RAMSAY.

THE following effects of fear on a dropsical man, is brought to my recollection, by the perusal of Howard's Essay, on the Hydropic State of Fever—See page 32, of the essay.

In the year 1779, while general Moultrie at the head of the American army was retreating before the British, under general Prevost who then invaded this state, a German named William Spoon, whom I knew well, one of Moultrie's militia, during a small halt which he made at Tulifinny, was placed on sentry: the enemy coming on, Moultrie resumed his retreat, and in the confusion, the officer whose duty it was, neglected to call Spoon off from his post: Spoon remained so much longer than was customary, that he at last determined to return to camp with a friend of his, named Otts, also a German, whom too I knew, and who was a very honest man, much to be depended on: Otts had also been on sentry, and he and Spoon accidently encountered each other, returning to camp much exasperated at the hardship of having been made to do double duty. To their astonishment, instead of finding their friends they came suddenly upon the British, who then occupied the very ground from which Moultrie had just retreated. Being seen by the enemy, Spoon and his comrade with difficulty effected their escape into the neighbouring swamp, where they concealed themselves.

Spoon had been for some months very dropsical, and it was expected that it would in the end cause his death. They had not long hid themselves when Spoon was seized with an inclination to make water; he was afraid to rise up, lest he should be discovered by the enemy, who they believed was in search of them; he therefore unbuttoned as he lay, and, to use his own words, in a little time he raised a "small creek, for he pissed as broad as a sword."—The swelling of his belly instantaneously fell, he returned home, and was my neighbour in St. Bartholomews parish, for years after, enjoying as much health as most of us, until a pleurisy put an end to him about the year 1798. I had the account from Spoon's own mouth, and it was confirmed to me by his comrade Otts.

August 11th, 1805.

DEAR SIR,

I have thought the above case not uninteresting, I therefore communicate it to you; that it is founded in strict truth I am satisfied, as it was notorious to me, and most of my neighbours, that Spoon was at the above time far gone in a dropsy, and that in a very few days, when, after his separation from it by the above cause, he rejoined the army; he was as lank as a greyhound, and soon became a hearty man.

Yours,

PAUL HAMILTON.

DR. RAMSAY.

Case of Extra-uterine Gestation, by DR. G. CLARK—*Communicated to the Editor by* DR. DANCER.

Kingston, (Jamaica) August, 1805.

SIR,

THE following case of extra-uterine gestation, is so extraordinary as to seem incredible; were I not well acquainted with Dr. Clarke, the gentleman who communicated it to me, and had I not afterwards had the opportunity of con-

firming the facts stated, by an examination of the woman, previous to her recovery; I should hardly have ventured on sending it you for publication.

It will seem to confirm the remarks of Dr. Denman in his excellent work,* and to give occasion to many curious inquiries, in which I shall not anticipate others, who may be more consistent in pointing them out.

I am, Sir,

Yours, &c.

THOMAS DANCER.

DR. JOHN REDMAN COXE.

St. Thomas in the Vale.

DEAR SIR,

I HAVE lately witnessed one of the most extraordinary cases that I ever remember to have met with in the annals of midwifery.

On Sunday morning last, a stout-made young Eboe wench, (about 18 or 19) was taken in labour.—The pains, however, were so slight, that she did not call for assistance till the evening. The negro woman who acted as midwife, on examining her, found the vagina impervious, so as not to admit the point of the finger, on account of the pressure occasioned by a large tumor in the perinæum. The anus was considerably dilated, and there flowed from it a quantity of blood and mucus.

In this state she remained, the pains returning at intervals, till half past two o'clock the next day, when I first saw her: she was at this time free of labour pains, had a good pulse, and her strength was not much diminished: the tumor in the perinæum was now very large, and the anus much dilated. On introducing my finger, I plainly felt the hairy scalp denuded: upon inquiry, I was informed, that there had been in the night a dis-

* Introduction to Midwifery, Vol. II. page 425.

charge of water, such as usually happens on the breach of the membranes; but there was not the least appearance of any discharge from the vagina. Having passed no urine since the commencement of her labour, she was much distressed by retention; but I had no catheter with me, and if I had had, I am confident I could not have introduced it, the tumour had so completely shut up the os externum. Thus informed of the situation of the patient, I had no hesitation as to what was to be done: I ordered fomentations and frictions with warm oil; soon after which strong pains came on. I then gradually dilated the sphincter ani, so as that I got my whole hand into the rectum, and succeeding (though with some difficulty) in getting my finger into the child's mouth, I extracted the head per anum; some time after this, by a succeeding pain, the body with the secundines, were delivered without any assistance: there was scarcely any laceration of the sphincter; the perinæum was not in the least injured, and the quantity of blood lost was not more than is usual in natural labour.

The fœtus appeared to be of the ordinary size of a seven-months child, (which accorded with the girl's reckoning) and from appearances could not have been long dead; perhaps it died in the beginning of the labour. I shall omit saying any thing as to the medical treatment after delivery, but confine myself to what was particular in the case.

The next day she was free of fever, and the anus was contracted to nearly its natural size; afterwards she complained of great pain and soreness about the parts; she had passed urine, but had had no stools: a clyster was therefore administered, which operated, and she continued to pass what she had passed before from the anus, a discharge resembling that of the lochia. At this time a similar discharge of bloody serum began to flow from the vagina, which, on examination, I found so far dilated as to admit of my finger: I could not however discover the state of the os uteri; and it appeared to me, there had been *no dilatation of the vagina, nor any sign of communication between that and the rectum.*

The former medical treatment was purſued, viz. fomentations, clyſters, bark, &c. and on Friday, (ſhe was taken in labour on Sunday,) when I viſited her with Dr. Hunter my partner, ſhe was ſtill free of fever: the bark having been neglected to be given, we afterwards found the anus and perinæum in a ſloughy mortified ſtate. But on ſtrict examination no communication could be found between the vagina and rectum.

On the ninth day from delivery, the external mortified parts put on a healing appearance. The perinæum had ſloughed, and the furcha was deſtroyed, but ſtill interiorly there was no communication between the rectum and vagina.*

The patient recovered, and there are lately ſome ſigns of her being again pregnant.

Yours, &c.

GEORGE CLARK.

DR. DANCER.

Caſes of Intermittent cured by Calomel. By DANIEL WILSON, M. D.

Richmond, (Virginia) Nov. 3d, 1805.

SIR,

I TAKE the liberty of ſtating to you in a curſory manner a few caſes in which mercury has appeared to be ſucceſsfully uſed in the cure of intermittent fevers.

In the autumn of 1803, I preſcribed for a lady who lived in the country. Her caſe was ſtated to me by her huſband, as a long-protracted intermittent of the quartan type. I directed a cathartic of jalap and calomel as introductory to the Peruvian bark. A few days afterwards I received a letter from the huſband expreſſing much uneaſineſs for his wife. He ſtated that her mouth was very ſore,† and that he was afraid I had made a miſtake, and had given mercury to his

* It was in this ſtage, that Dr. D. ſaw and examined the patient.

† The cathartic did not operate.

wife. I answered his letter, and prescribed a saline cathartic, together with an astringent gargle: a few days afterwards I saw the gentleman who expressed much satisfaction at the recovery of his wife. He observed to me that as soon as her mouth became affected she never had a return of the ague.

Every physician is ready to bear testimony to the efficacy of mercury in those diseases commonly called bilious, and as a variety of the same disease, I readily concluded that in this instance mercury had cured the intermittent.

Until last December a fair opportunity did not offer by which I might satisfy myself more fully: in that month a poor young man, a journeyman baker, called on me for advice; his case was also a long-protracted quartan. I prescribed mercury for him in such doses as gently to touch his mouth, and had the satisfaction to ascertain that as soon as his mouth became affected, his agues left him. He was extremely reduced by the disease, and had the appearance of a very great predisposition to dropsy. His cure was confirmed by the use of the Peruvian bark.

Within these few days I am favoured with a similar case from a practitioner in the country, which, like my first, was the result of accident. A child under two years of age laboured under an intermittent fever: a cathartic of which calomel composed a part was prescribed, but not operating, a sore mouth was induced, and the child has not had a return of the ague.

These cases stand too much alone to establish a principle in medicine, but I am very fully persuaded that they may be confirmed by further experience.

Should they be found worthy of a place in your Medical Museum, you are very much at liberty to insert them.

Your most obedient humble servant.

DANIEL WILSON.

Dr. John Redman Coxe.

Observations tending to prove the contagious Nature of Yellow Fever.
By THOMAS DANCER, M. D.

Kingston, (Jamaica) June, 1805.

SIR,

I HAVE to thank you for the first number of your Medical Museum, to which I wish success, and should be glad of any opportunity of contributing thereto.

It is my misfortune to differ from the Medical gentlemen of the United States, on the subject of yellow fever. They contend, that it is wholly of local origin, and not propagated by contagion. The reasons which induce me to entertain an opposite opinion, were transmitted to the Editors of the New-York Medical Repository two years ago: not having received any numbers of the above-mentioned work, since that period, I cannot tell whether my paper was deemed worthy of insertion, and I have not at present leisure to detail at length the arguments and facts therein stated. I shall however relate one or two pointed histories, which in my judgment put the matter out of doubt as *it respects the yellow fever of Jamaica.*

History I.

In the month of September, 1803, a fever broke out amongst the soldiers of the 60th regiment, at Up Park camp, (a most healthy situation, in the neighbourhood of Kingston) which carried off 80 men.

That this fever (characterised by all the symptoms of yellow fever,) was contagious, appears from the following circumstances.

1st. No local cause existed that could give rise to the disease.

2d. It went progressively through the battalion; the persons nearest to those who were sick, being the first that were affected.

3d. The medical gentlemen who attended were all taken ill, one of whom died and the rest recovered with difficulty.

4th. The ſerjeants and orderly men were all affected and ſeveral of them died.

5th. But what was moſt ſingular, every man employed in ſhaving the ſick fell a victim to the diſeaſe.

The above account is atteſted by Dr. Brown, the ſurgeon of the regiment, and now ſurgeon to the Royal Artillery; the circumſtances are well known to all the officers and privates of that battalion.

Hiſtory II.

Extract of a Letter from Dr. Dick of St Thomas, in the Eaſt, to Dr. Dancer, Physician in Kingston, Jamaica.

DEAR SIR,

DURING the period of twelve years that I have practiſed in this neighbourhood, I have had abundant opportunities of ſeeing patients under yellow fever, and I have always been of opinion, that the diſeaſe was contagious; but as a difference of opinion exiſts among the faculty on this ſubject, I preſume, the following hiſtory, which I am about to relate, cannot fail of convincing *all ſuch as are open to conviction*.

In the harbour of Morant Bay, the yellow fever has lately prevailed in a very alarming degree. The ſhip in which it at firſt appeared, was the Hercules, Capt. Powel, of Briſtol; a veſſel that was kept remarkably clean and neat, and it was therefore concluded the diſeaſe could not have *originated* on board that ſhip. It was afterwards found that two of the crew (the firſt attacked) had been on board another ſhip, the Roſelle, lately arrived from Kingſton, where ſhe had loſt the greateſt part of her men by yellow fever. Obſerving this, I recommended to the maſters of the other veſſels to prevent their men having any communication with the infected ſhip Roſelle. This injunction was attended to by the *London* ſhips, but nothing could prevent the crews of thoſe belonging to Briſtol from viſiting their ſick

friends on board the *Hercules;* and the conſequence was, that many of them were attacked by the diſeaſe, and fell a ſacrifice to their imprudence.

There being at this time an impreſs of ſeamen, the crews of the merchantmen were obliged, for ſecurity, to abandon their ſhips; and thoſe recovering from yellow fever, aſſembling on ſhore with the reſt, communicated the diſeaſe to thoſe who by due precaution, had previouſly avoided it, and then the diſeaſe became *general.*

Capt. Domett, of the ſhip Sir Edward Hamilton, wiſhing to ſcreen his men from the impreſs, ſent ſome of them to an eſtate five miles diſtant from the harbour. Amongſt theſe, was one of the name of Frederick Bech, who was then recovering from yellow fever: from him Mr. M'Namara one of the perſons on the eſtate caught the infection, and died on the third day of his illneſs. Mr. Neſs, the manager of the property, and another gentleman, Mr. Slinny, both caught the ſame fever: the former died on the third day, but the latter fortunately recovered.

Yours, &c.

THOMAS DANCER.

DR. JOHN REDMAN COXE.

Diſſection of a Body that died of the Yellow Fever at Philadelphia, in the Autumn of 1805, *with practical Obſervations and Remarks.* By JAMES STUART, M. D.

THE utility and advantages of diſſections to the eſtabliſhment of rational indications of cure in diſeaſe, have been ſo generally and juſtly admitted, from the very earlieſt ages of medicine, that it would be, at leaſt, unneceſſary, if not intruſive, to inſiſt on them in the preſent. In it we have only to re-

gret, that indolence, or a want of ſufficient leiſure ſhould ſo much have retarded our inveſtigations, that a labour of upwards of two thouſand years in the ſtudy and practice of medicine, has left the ſeats of many of the moſt cruel and fatal maladies incident to humanity entirely unexplored. In no inſtance is our want of information in pathology more to be lamented, than in the diſeaſe which gave riſe to the diſſection before us. In confirmation of this important truth, the reader is referred to the erroneous opinions formerly received on the ſource of that *black matter* ſo frequently vomited up in the laſt ſtage of *yellow fever*. Before my obſervations on the ſubject *publiſhed in May* 1798, *this diſcharge was always ſuppoſed to originate in the liver.** Nor was it ever before ſuſpected that the qualities of

* Vid. My inaugural Diſſertation on the Salutary Effects of Mercury in Malignant Fevers defended before the truſtees and medical faculty of the Univerſity of Pennſylvania, 22d of May 1798, from page 10, to page 16. To the reaſoning found there, had it not been foreign from my ſubject, two diſſections made by me in the year of 1797, might have been added. A part of one of theſe, as they have never been publiſhed, I ſhall tranſcribe from my note-book in this place, in the ſame language with the original.

P. M'G. puerulus quidam biennis, febre biliosa maligna ad quartam diem laboravit, cum ore ejiciebatur evomitionis ſubnigræ illa species, quam in hoc morbo, *ſemper ſymptoma letbiferum obſervavi.* Coloris intenſitas, uſque ad diem ſextam obnubilavit, quando corpus frigeſcebat, multa caligine ſigna mortis denſabantur, et die decima menſis Septembris, annoque ſalutis humani milleſimo ſeptingenteſimo nonageſimo et ſeptimo, ad auras animam ſpiravit.

Parietibus abdominis reſectis, hepar magnitudinem prope duplam, et in omni parte, *ſubter coſtas immediate jacentibus bis exceptis*, quæ tinctæ naturali, colorem exhibuit balauſtinum. Veſica fellea eminebat repleta cum multa tenuique aquoſa bile, quæ, propter coarctionem ducti choledochi communis, non in cavitatem inteſtini duodeni cogereter. In tunicis gaſtricis nempe externis, denſa eminenter tranſlucebat inflammatio. Hoc viſcere cultro ſubjecto, in penetrali ejus nil annotabatur præterea muci viſcidi parva copia, quæ, *picta multis ſtriis fluctuantibus materiei ſubnigræ ad viſum in pauci differebat ab illa in diebus morbi poſtremis vomitione ejecta.* Inflammatoriis variis lineis flexuoſis villoſa inquinabatur tunica, quæ cum interſtitiis minus morbidis irregularis reticulati operis pictionem dabant.

Eædem lineæ, illis muco adhærente, ſublividæ ad oculos videbantur; atſi eſſent ſtudioſe ſpongia repurgatæ, multo luridiorem exhibebant colorem. Com-

the matter diſcharged, differ in different caſes according to the ſource from which they are derived—that they are *not always fatal*—or, laſtly, that the probable iſſue of the diſeaſe may be preſaged from a knowledge of its ſource. But on the contrary ſo ſtrongly was the appearance of any black matter from the mouth aſſociated with the death of the patient as a conſequence; that, at the ſight, as upon an attack of that plague of old, ſo elegantly deſcribed by the immortal Lucretius, he was immediately deſerted both by phyſician and nurſe,

——————muſſabat tacito medicina timore,
——————————ubi quiſque videbat,
Implicitum morbo, morti damnatus ut eſſet,
Deficiens animo mœſto cum corde jacebat
Funera reſpectans, animum ut mittebat ibidem,

and this perhaps when a more accurate knowledge of pathology might lead to a certain cure.

Such are the reflections which have induced me to take every opportunity to inſpect the bodies of thoſe who died with the late epidemic; and theſe, it is hoped, will be a ſufficient apology for the following communication.

On the 23d of September, 1805, I viſited Benjamin High, a child of three years old, who had been taken with the uſual

preſſum manu hoc opus retiforme, ſubnigro irrorabatur fluido, cujus conſiſtentia, propter copiæ exiguitatem, ad ſenſus non eminebat. Illo iterum deterſo, opus reticulatum aſſumpſit Mutinenſem colorem, qui nulli mutationi poſtea ſubjiciebatur, &c."

On the oppoſite page of my note-book, as a note to this, the following quere is propoſed.

" His obſervationibus datis, nonne medicorum opinio, quæ urget materiem nigræ vomitionis *lethiferæ* ab hepate originem ducere, lucet erronea? Imo hæc omnia pono, et, ab iiſdem morbi veſtigiis lucidius patet, illa excretio evenit ex *arteriolis gaſtricis*, quæ in ſtatu ſanitatis ſolebant ſuccum gaſtricum mucumque ſecernere.

ſymptoms of the prevailing epidemic on the nineteenth. In the interim nothing unuſual had occurred. His complexion was now ſallow; his eyes ſunk; his ſkin cold and cadaverous; although apparently comatoſe, he kept his head conſtantly rolling from ſide to ſide, and his hands inceſſantly in motion.

His pulſe was ſcarcely perceptible; when diſturbed he uttered a ſpiteful and malicious ſcream. On preſſing the right hypochondrium he ſeemed ſenſible of much pain, which he never failed to evidence by a moſt piteous cry. About the tip and ſides, the tongue was white and moiſt, and on the middle and poſterior part, of a brown or mahogany colour. His bowels had been twice opened by ſmall doſes of caſtor oil, without relief. The ſtools procured by this were watery and dark-coloured. A mercurial purge, fomentations of brandy and ſalt, with epiſpaſtics to the extremities, and to the right hypochondrium were preſcribed. On the morning of the 24th he was warm; the bliſtering plaſters had raiſed; and his pulſe was much more perceptible. The coma was leſs profound, and he ſeemed occaſionally ſenſible of ſurrounding objects. He was ordered ſmall and frequent doſes of calomel, with a repetition of the fomentations. In the afternoon, he was not ſo well.—The medicines were continued as before. On the morning of the 25th, the ſkin was generally ſuffuſed with yellow; he had diſcharged ſeveral black watery ſtools; was leſs diſpoſed to ſleep, and upon the whole was much better, though it was very remarkable he ſtill continued to agitate his head and hands as before. The ſame treatment was continued, and porter with water directed for his drink. In the afternoon, there was a ſlight exacerbation of febrile ſymptoms.—The porter and water was diſcontinued. On the 26th he was much the ſame as on the morning of the preceding day. The porter and fomentations were reſumed; the medicines were continued, and he was allowed, now and then, an oyſter. In the afternoon he was better. On the 27th, he was rather better; though his ſtools were

still dark-coloured and of a watery consistence. Warm stimulating fomentations were now directed to be applied to the abdomen and to the blister on the right hypochondrium; and a dose of ol. ricin. to be repeated until the stools should change, or until it should pass through the intestines. On the morning of the 28th, at about three o'clock, he suddenly changed for the worse. The blisters were pale and discharged but little; the cutis vera, from being suffused in several spots with stagnated blood, assumed the appearance of gangrene. In the evening the symptoms were much the same, except that the heat of the skin was somewhat increased. On the 29th, he was much cooler and apparently insensible. His pulse was altogether imperceptible; although he still continued to swallow whatever was presented to him. The fomentations were repeated, and at proper intervals, tincture of Peruvian bark with strong draughts of brandy and water were prescribed. In the evening his skin was warmer, although he was still without any return of pulse; the other symptoms remained the same. 30th, At about five o'clock this morning he with much tranquillity expired.

On cutting into the integuments of the abdomen, the cutis was unusually rigid and dry, and the adeps tinged with a yellow colour. The cavity being laid open, the *omentum* was found wound up inwards into a roll; the *liver* was much enlarged and the colour changed for that of an intense orange. The *cystica fellea* was replete with a pale watery bile. The *ductus choledochus communis* was so much contracted as to refuse a passage to the contents of the cyst, even upon the most forcible pressure. The *stomach* was contracted to nearly half its natural size: upon laying open this viscus, the *longitudinal rugæ* of the villous coat were found increased in size, to that of the largest goose-quill. In the cavity nothing was found, except a few ounces of fluid, which most probably was the drink taken in a short time before death. The *villous coat* was uncommonly destitute of mucus, and, (although the vomiting had generally been

very urgent, upon his being rouſed, a circumſtance which ſhould have been noticed in the hiſtory of the caſe,) without the leaſt veſtige of inflammation. In the *duodenum*, for two or three inches immediately round the opening of the ductus choledochus communis, a ſlight degree of inflammation was obſerved. The remaining tract of inteſtines was entirely free from this, and void of contents, except mucus and flatus, neither of which laſt were in any way abundant, while they were as free from any diſcolouration from bile, or fæces, as though they had been cleanly waſhed. In the lower portion of the *ilium*, beginning at about two-thirds of its length from the jejunum, were diſcovered *ſix introſuſceptions* of a lower portion of the inteſtines into that part immediately above. The upper one of theſe, as may be ſeen in the annexed engraving, was, in its contracted ſtate nearly five inches long; and if pulled out to its greateſt extent, would probably meaſure not leſs than twenty. The longeſt portion intervening between any two of theſe introſuſceptions, was about a foot and an half, and the ſhorteſt about ſix inches; while the length of the introſuſceptions decreaſed in a direct ratio with the decreaſe of diſtance to the cæcum, until the laſt, in its convoluted ſtate, did not exceed one inch and an half in length. The *colon* and *rectum* ſuffered the ſame changes with the ſtomach. The urinary bladder was ſo contracted as to aſſume nearly a ſolid form, and was perfectly empty. The *kidnies* and *renal glands* did, in no reſpect, deviate from thoſe of children of the ſame age dying of other diſeaſes. The meſentery was free from all appearance of diſeaſe, except that the glands were ſomewhat unuſually enlarged. The pancreas and ſpleen retained their natural ſtate. The time allowed for this diſſection did not admit of an examination of the viſcera of the thorax and cranium. Nor was this much to be regretted, as the ſymptoms during life did not warrant a ſuſpicion that ſuch an examination could have thrown the leaſt light on the cauſe or cure of the diſeaſe.

Whether this diſſection be conſidered in a practical point of view, or in reſpect to the uncommon appearances in the inteſtines, it will be found equally intereſting and important.

As the introſuſceptions were the firſt, as far as I know, that were noticed in malignant fever, it was natural enough to attribute them to ſome accidental circumſtance unconnected with the diſeaſe. This I acknowledge I was much inclined to do. But, as a few days afterwards I diſcovered three of theſe in another body which died with the ſame epidemic, and nearly under the ſame ſymptoms, and in which the other viſcera were in a ſtate ſimilar to thoſe of the firſt, I am ſatisfied the derangement under conſideration muſt have depended upon ſome cauſe intimately connected with the diſeaſe.

If it be conſidered that bile is a principal agent in digeſtion and in ſupporting the periſtaltic motion of the inteſtines—that a ſupply of this principal agent was always found entirely intercepted, in thoſe caſes in which introſuſceptions were obſerved, we ſhall find no difficulty in referring this cauſe to a deficiency of bile in the alimentary canal. The inteſtines, as other parts under ſimilar circumſtances, become debilitated by an abſtraction of their moſt congenial and natural ſtimulus; by this means they are rendered torpid or take on a ſpaſmodic ſtricture in ſome parts, while others retaining their uſual, or acquiring even a preternaturally vigorous action, crawl over and ingulph them into their cavities.

From this view of the ſubject, there is reaſon to conclude, that theſe introſuſceptions have not been peculiar to the epidemic of the preſent year; but that they are always to be ſuſpected, wherever a ſoreneſs of the right hypochondrium, a ſenſe of weight in the hypogaſtric region, a vomiting, or a diſcharge of blackiſh watery matter by ſtool occurs; and wherever the caſe is diſpoſed to be unuſually protracted without any evident cauſe.

Upon comparing the ſymptoms of this caſe with thoſe of many others, and upon recollecting that I have been frequently requeſted to examine with the hand, lumps in the abdomens of

my patients in the yellow fever, by them emphatically called "*knots*," I am convinced many ſimilar caſes had come under my care before. A very impreſſive one of this kind occurred laſt May in the perſon of Capt. J. C. This gentleman had been about three days ill with a malignant fever, when he complained much of the ſymptoms enumerated, and requeſted me to examine ſeveral lumps in the abdomen. They were irregular in form and ſeated in that region occupied by the ſmaller inteſtines. They were ſore to the touch, but not painful. By copious bleeding and purging, and the application of an epiſpaſtic to the abdomen, they diſappeared, and the caſe though very dangerous terminated favourably on the ſixth day.

Notwithſtanding ſo much has already been ſaid on this diſſection, it cannot be well diſmiſſed without ſome practical obſervations on the cure.

The circumſtance of the diſeaſe not having been diſturbed by art before the formation of the third ſtage, renders this caſe peculiarly favourable for an undertaking of this kind; but the communication before us being neceſſarily circumſcribed to a few pages only, I ſhall confine myſelf to ſome general obſervations on the cure, that may ſerve to prove the correctneſs of thoſe outlines drawn by an abler hand, and altogether avoid touching ſhades, except ſuch as may have been left out in former pictures, or ſuch as may ſeem to be derived from the peculiar light in which the ſubject is here viewed.

The ſymptoms of the diſeaſe and the appearances on diſſection warrant a concluſion, that the inflammation obſerved in the liver was the primary *topical* affection; that this was the effect of morbid excitement in the whole vaſcular ſyſtem; that the ſtricture on the ductus choledochus communis originated in a relative defect of local ſtimulus occaſioned by a vitiated, and finally a ſuppreſſed ſecretion of bile, which moſt probably occurred early in the caſe; that the contraction of the ſtomach and that of the colon, with the introſuſceptions of the ſmaller inteſtines, depended upon an abſtraction of ſtimulus in the abſence of the ſame fluid.

From this pathology, it will follow, the cure of the diſeaſe in ſuch caſes muſt turn upon three indications.

1. Upon the removal of inflammatory diatheſis.
2. Upon obviating the effects of this.
3. And laſt, upon reſtoring the ſtrength of the patient.

To anſwer the firſt of theſe, it muſt be acknowledged, no means more effectual can be employed than blood-letting, purging, and a ſtrict obſervance of the antiphlogiſtic regimen. What then muſt we think of that practice which proſcribed bleeding as a deleterious remedy? What ſhall we ſay of the feebleneſs of that practice which, with the greateſt caution, employs doſes of a few grains of magneſia, or of fifteen grains of cremor tartar with five grains of jalap, to anſwer the important end of this indication? What are we to think of the practice that employs the ſtimulating powers of epiſpaſtics to ſubdue the inflammatory ſtage of this diſeaſe? The firſt are occupied in removing obſtacles to the progreſs of fire, while the laſt is buſied in ſupplying more of that element to a building already in flames.

Beſides the general effects of purges in reducing inflammatory action, &c.—the intimate ſympathy exiſting between the inteſtines and the biliary ſyſtem, renders them peculiarly well adapted to remove inflammation of the liver. By their mechanical operation on the *primæ viæ*, by exciting ſenſation in theſe, and by accelerating the periſtaltic motion, they empty the gall cyſt, remove or prevent ſtrictures of the ductus choledochus communis and of the inteſtines, and obviate introſuſceptions of the latter.

If it be admitted that ſtrictures of the ductus choledochus, and ſtrictures and introſuſceptions of the inteſtines, are the conſequence of a ſudden abſtraction of ſtimulus, in the ſuppreſſed ſecretion and excretion of bile, it is probable purges may act by ſupplying, in their ſtimulating powers, a ſubſtitute for bile, and hence that theſe may be rendered more certain and effective by a combination of the INSPISSATED BILE of other animals.—I know this propoſal will meet its opponents, upon the principle

that bile is an offending fluid in fevers; and that novelty will not be a ſmall obſtacle to its being put into practice: but, if it be conſidered, that an increaſed ſecretion of this fluid is the conſequence, and not the cauſe of irregular and febrile action; and that fevers are more tractable in the caſes wherein it occurs, we ſhall rather be encouraged than deterred from taking advantage of this remedy.

Upon theſe principles, it is conceived, the purges employed in the inflammatory ſtage of malignant fever may receive a valuable addition in the inſpiſſated bile of other animals. This ſubſtance ſeems more particularly indicated wherever a ſenſe of weight and a foreneſs in the right hypochondrium, or hypogaſtric region occur; where white, or black watery ſtools are diſcharged; and in all caſes, where the diſeaſe is diſpoſed to be protracted to an unuſual period, without any evident cauſe.

It was ſaid the ſecond general indication, in this grade of fever, turned upon obviating the effects of inflammatory diatheſis.

Theſe are a great proſtration of ſtrength, or a ceſſation of action in that part of the arterial ſyſtem moſt remote from the heart, occurring about the third or fourth day of the diſeaſe; a conſequent congeſtion, inflammation, gangrene, paralyſis, or rupture in ſome of the viſcera; a ſuppreſſed ſecretion of bile, ſpaſmodic ſtrictures of the ductus choledochus communis, and ſpaſmodic ſtrictures and introſuſceptions of the alimentary canal.

This proſtration of action and retreat of fever to the internal parts, on which the other evils enumerated depend, are rather to be anticipated in the formation, than cured after they have taken place. This is to be attempted by the free and bold uſe of the remedies propoſed under the firſt indication of cure, in the beginning of the diſeaſe, and by the uſe of mercury ſo employed as to excite ptyaliſm as ſoon as circumſtances will admit. But when the inflammatory diatheſis has been ſufficiently reduced, or the patient ſhall be threatened with that alarming centripetal ſtate of fever moſt commonly occurring on the cloſe of the third

or fourth day, every means to excite action in the cutaneous veſſels, and to call off the fluids from the vital parts are to be employed. The moſt powerful of theſe are found in warm diluent drinks, fomentations of brandy and ſalt, warm or even hot bricks, ſinapiſms and bliſters to the extremities, and over ſuch parts as may ſeem to be affected with topical inflammation; ligatures on the extremities, tight enough to obſtruct the return of the blood in the veins, are alſo, as I have had occaſion to obſerve in another place, a moſt powerful and uſeful remedy in this ſtage of diſeaſe.*

By the action of theſe the blood is detained in the external veins, an accumulation in the larger internal arteries is prevented, and, without abſtracting ſtrength from the general ſyſtem, the force of the arterial ſyſtem is taken off from vital parts.

After ſaying this much on the remedies to fulfil the firſt two indications, it might be expected I ſhould add at leaſt a few words on thoſe of the third. But, as theſe are embraced by the general tonic plan, and, as it was before hinted, the limits of this paper will not admit of any detail of remedies, I ſhall only obſerve, the ſyſtem is here left in a ſtate ſo extremely excitable, that the uſe of ſtimulants and of tonics are to be entered on with the greateſt caution; and conclude by referring the reader to ſuch authors as have profeſſedly treated on this ſubject.

Explanation of the Plate.

a a a. The external receiving portion of the inteſtine ſuſpended by the meſentery in the poſition it occupied in the body.

b. b. Two meſenteric glands removed with the inteſtine.

c. A piece of the meſentery to which the inteſtine was ſuſpended.

d. The external end of that part of the inteſtine received, occupying the whole extent of the receiving portion, a a a.

* See the firſt volume of the Philadelphia Medical Muſeum.

e e. The received portion immediately at its reception into the portion receiving.

f. The upper end of the intestine where it was cut off.

g. A small protuberance made by two turns of the ligature passed round the intestine.

h. The lower end of the intestine at the part where the ligature is passed.

i i. The ligatures passed round the intestines.

Case of Blindness induced by an Accident of an uncommon Kind—By the EDITOR.

JULY 27th, 1805. My eldest son, John Redman Coxe, aged about six and a half years, playing in the afternoon with a whip he had made of a long piece of the tinsel cord, which serves for children's hat-bands; had the misfortune to strike himself with it in the right eye, and immediately complained of great pain. He would not, or could not open it that I might examine it; and as I considered the pain to be no more than what is usually caused by any severe blow on this organ, I only desired him to bathe it with cold water. After complaining nearly an hour he fell asleep on the parlour floor, for an hour and an half. He awoke with a diminution of pain, but still said he could not open the eye: as, however, he examined with attention, by candle-light, a bat I caught in the house, and did not appear to be in much pain, I hoped a night's rest would remove the complaint. He slept well and rose with little pain, yet still kept the eyelid closed: he now, however, was able to allow it to be examined. The inflammation was apparently small, but on a closer view I perceived a portion of the tinsel cord adhering firmly by one extremity to the inside of the

Engraved by Lawson for the Philad.ª Medical Museum.

transparent cornea, and passing directly across the anterior, through the pupil to the inner chamber of the eye. The wound of the cornea was very perceptible, but no vestige of the tinsel was externally visible. An obscure milkiness was already apparent on the crystalline or its capsule, and indicated the misfortune which was to be apprehended, especially as so much time had now elapsed, owing to my ignorance of the injury sustained; for, till this period, I had not any other fear than that a violent inflammation might be the consequence of a blow inflicted by a whip on the orbit of the eye.

As no time was to be lost, I immediately requested the attendance of Dr. Physick, whose constant and extraordinary kindness, I can never forget; and to whom I desire, thus publickly to return my most sincere thanks, for the great obligations I feel myself under, for his skill, and assiduous attention to my son. No doubt could be entertained as to the necessity of removing the extraneous body. The only question was how this was to be best effected. It was proposed to introduce a couching needle, and endeavour to extricate it from the cornea, when after its falling to the bottom of the anterior chamber, it was presumed, an incision of the cornea would allow it to be extracted. The uncertainty of being able to extricate it by this measure, with the certain evacuation of the aqueous humour on withdrawing the needle, and the chance of injury to the iris, together with the difficulty, if not impossibility of incising the cornea, after the collapse occasioned by the loss of the aqueous humour, prevented this plan being pursued. It was ultimately agreed to make a small incision of the cornea, and to pass up a small pair of forceps to extricate the tinsel. Though an injury to the iris was anticipated by its edge, after the evacuation of the aqueous humour, yet this was a trifling consideration to the chance of violent inflammation and suppuration of the eye by longer delay, and no plan appeared more likely to succeed. At half past one, or twenty hours from the ac-

cident, Dr. Physick performed the operation, the eye being fixed with a speculum. After the incision of about the fourth of the cornea, the aqueous humour was largely evacuated; but the forceps, from the confinement they experienced, could not take hold of the tinsel, a circumstance of great anxiety. A silver curette was therefore introduced, and at the second attempt it was dislodged, and brought down to the opening. After a short pause with the lids closed, the tinsel escaped on the globe of the eye, and proved to be nearly one-fourth of an inch in length. The eye was now bound up, his hands secured; and, (having taken thirty drops of laudanum before the operation at two doses,) soon after going to bed, he fell asleep. It may be necessary to remark, that after the escape of the aqueous humour, he complained of great pain of the head, probably from the tinsel then coming more in contact with the iris or crystalline lens. This pain was not very permanent. He had little appetite to-day: at 4 o'clock when he awoke, he eat some melon, but, probably owing to the laudanum taken, soon vomited it up. He complained of but little pain, and soon fell asleep again. He bore the whole operation astonishingly, and doubtless the bystanders felt much more severely than he did. The iris was slightly injured by the tinsel in coming away, but in all probability much less so than it would have been, by any other mode of proceeding.

He slept about five hours, and considerably also during the night.

At 4 A. M. of the 29th, as he was restless, and his skin was hot, I took away about 5 oz. of blood, after which he again slept. He passed much water, but had no stool this day: diet was bread and water: he has no pain of the head or eye, and his spirits are pretty high: he took in the afternoon 6 grains of calomel. He tossed about in his sleep considerably, more from the heat of the weather and his confinement, than from fever. Complains that the light is painful to him, in a dark room.

30. The ſame; no ſtool ſince the operation; reſtleſs; bled to 6 oz. and took 3 grains of reſin of jalap. Eye ſenſible to the impreſſion of light.

31. Slept conſiderably, no pain, bowels not moved: on examining the eye, it was found leſs inflamed than might have been expected. He ſees every object diſtinctly. He is extremely reſtleſs, owing to the activity of his diſpoſition, which renders it very difficult to manage him, the bandages on his arms repeatedly looſening. He ſlept from 3 till 11 P. M. when he had an opening. He was very reſtleſs during the night, and complained much of fiery ſparks before the eye.

Auguſt 1ſt, the eye was moderately inflamed; but a ſlight opacity of the cryſtalline is evident: in order to check his ſpirits which render him ſo unmanageable, it was concluded to give him one-eighth of a grain of emetic tartar, to naufeate him; he took alſo more reſin of jalap. In the evening as the ſparks continued, he was bled to 4 oz.—an enema was adminiſtered, and a large bliſter applied to the back of the neck. He reſted tolerably and complained but little of the ſparks; has had one or two good evacuations.

2d. He was again bled this morning to 6 oz. and ſlept the greateſt part of the day. The blood has never appeared ſizy. In the afternoon 4 grains of reſin of jalap were given, which operated once. A piece of water melon which he eat ſickened him, and cauſed him to diſcharge the contents of his ſtomach. Slept well till 3 A. M. of the

3d. Eye looks favourable, and iris appears more regular. Opacity of cryſtalline continues, but the external inflammation is almoſt gone. He has cried much at different times, but it appears not to injure him, the inciſion having united, and the eye is again prominent from the renewal of the aqueous fluid. He took more of the reſin of jalap, which produced two or three evacuations.

4th. Appearances favourable. Eye looks well, and various objects are perceptible, as ſciſſars, money, &c. All yeſterday af-

ternoon and during the night he saw the appearance of hay and straw; and the letter A quite red, and as he said, as big as a bed-post; he has no pain, nor is any blood effused to account for the red appearance. These objects he continued to see, as well as sparks, for several days, but they gradually subsided.

5th. The eye appears quite clever, and all inflammation is gone, yet the milkiness of the crystalline continues although he distinguishes objects completely. He has had two or three stools; restlessness from confinement extreme.

7th. The opacity seems to have augmented, he is now obliged to look askance in order to distinguish objects. Another blister ordered to the neck, and five grains of calomel were given with a view to touch the salivary glands.

8th. 4 or 5 stools—eye the same—ordered tartar emetic every hour in nauseating doses.

9th. Could not induce him to take his medicines, and he has grown so suspicious that it is impossible to cheat him; opacity augments, and vision greatly impaired; 3 grains of calomel ordered, and a blister behind the right ear: lowest diet, as toast and water, rusk, and melon, and strict confinement in a dark room continued; the blisters to be kept open with cantharides.

10th. Three grains of calomel were given, and afterwards four grains of resin of jalap.

12th. Mouth is sore; spits considerably, but there is no alteration in the opacity: as there appeared little hopes of the dispersion of the opacity by any means we could propose, it was concluded on the 13th, to heal up the blisters and omit further attempts.

14th. Cannot distinguish any objects, and the eye apparently is insensible to the action of light. Further confinement was deemed unnecessary, and he gradually resumed his former habits.

In a very short time, he appeared to suffer no inconvenience from the loss of the sight of this eye, and now to a stranger, (and even to his friends, at a little distance) no difference in

the appearance of his eye is perceptible. On examining the injured eye, the iris is perceived somewhat elongated, and the cryſtalline continues of its milky hue. The pupil by expoſure to the light, contracts readily.

One important deduction I would wiſh to draw from this caſe, is, that we ſhould invariably examine the eye in caſe of injury as ſpeedily as poſſible, as future miſchief may perhaps be obviated by early attention. I do not apprehend the opacity could have been obviated in the preſent inſtance, if even the operation had been inſtantaneous; as it is probable the tinſel had in the very infliction of the ſtroke touched the cryſtalline, and thus laid the foundation of the ſubſequent opacity.

Philadelphia, November 20th, 1805.

Obſervations on the Vaccine. By GEORGE FARQUHAR, M. D

Philadelphia, December 17th, 1805.

DEAR SIR,

DURING my viſit to Jamaica, in the month of April laſt, I was fortunate enough to produce the vaccine diſeaſe in ſeveral white children, although the virus uſed, had been kept for ſeveral months; ſome part of it having been ſent from the Jennerian ſociety in London, and the other, being part of what you had the goodneſs to favour me with in December laſt;* and from the above children, before my departure from the iſland, the diſeaſe was diffuſed among many hundred negroes. It gives me pleaſure to mention, that although vaccination has had its opponents in Jamaica, as well as in other countries; it

* This laſt infection on glaſs, &c. was, at the time given, ſeveral months old.—E.

has now almoſt become univerſal throughout the iſland. One very great cauſe of the injury the reputation of vaccination has in any part of the world ſuffered, is, that the diſeaſe being ſo mild as not to require medicine, the attendance of a practitioner is often diſpenſed with; and the operation entruſted to any individual unacquainted with the characteriſtic ſymptoms of kine-pox, and thereby a local affection is induced, not unfrequently miſtaken for the genuine conſtitutional diſeaſe; the evils accruing from this circumſtance are incalculable.

As the yaws like ſmall-pox, leave the conſtitution ever after inſuſceptible of a recurrence of the diſeaſe; I was very deſirous laſt ſummer, while in Jamaica, of aſcertaining how far the prophylactic virtues of kine-pock might extend to that loathſome diſeaſe; not however having leiſure for this, ſome of my medical friends, at my requeſt, have promiſed an inveſtigation of the ſubject; and when I receive the reſult, I ſhall feel pleaſure in communicating it to you.

With much reſpect,
I am, dear Sir,
Your obedient ſervant.
GEORGE FARQUHAR.

DR. JOHN REDMAN COXE.

Cafe of Superfœtation communicated by DR. FARQUHAR.

In the pariſh of Vere, in the iſland of Jamaica, in the month of April laſt, Mrs. B. a lady of great reſpectability, aged about twenty-five years, was delivered of her fifth child, a daughter; which died in about two weeks after its birth. Between three and four weeks after which, Mrs. B. having been ſufficiently recovered to attend to her domeſtic concerns; was again attacked with the pains of child-birth, and delivered of a very fine healthy boy, who is now alive.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

*On the Inexpediency of erecting Foundling Hospitals.**

"Down then with Foundling Hospitals, more noxious than pestilence and famine."—*Kames.*

THE attention of the medical philosopher may often be extended with advantage to subjects which seem to lie beyond his province. Thus the application of public charity is worthy of his most serious consideration, and so far as it is intended to relieve physical wants, or to remove moral evils by physical means, his intimate knowledge of the nature and constitution of man eminently qualifies him to direct how it may be most beneficially exercised. In the distribution of private charity, the individual is influenced by motives of humanity, or some momentary impulse, and in this propensity he may safely be indulged; for although ostentation, or the desire of getting rid of clamorous importunities, and removing disgusting impostors, may sometimes induce us to throw away what would have afforded effectual relief to objects more deserving of assistance, yet private charity will seldom be so considerable or promiscuous as to become a public evil. Besides, that attention and sympathy which commonly accompany individual charity, more effect-

* Edinburgh Medical and Surgical Journal, No. III.

ually command the gratitude, and improve the morals of the relieved, than the most liberal allowance from a fund on which they have a real or imaginary claim. But public charity requires the most active superintendence, and the most unceasing vigilance, to prevent it from becoming a public burden, and a public nuisance. The delight we experience in indulging the feelings of humanity, the approbation of our fellow-citizens, and the appearance of utility in public institutions, often induce us to squander immense sums, for which no adequate benefit results to the community. As the various and numerous distresses of the poor far exceed any funds which could be collected for their relief, whatever is not applied in the best possible manner is misapplied, and therefore, in their distribution, partial humanity must be totally disregarded, and public utility alone consulted. The first object of charity, in all instances, is to perform the greatest good with the least means; whenever, therefore, a public institution relieves any of the distresses of the poor more effectually and economically than if they were individually assisted, and whenever the relief granted holds forth no temptation to increase the number of those applying for it, or in the most distant way to encourage vice or idleness, then are public institutions truly useful. Of this kind are almost all the institutions for the relief of the diseases and infirmities of the poor. No man will break a limb, because there is an hospital in which it will be set, nor will any man become deranged, because there exists a lunatic asylum for his reception. On the contrary, public institutions, whose objects might be more effectually and economically obtained by individual assistance, are at least hurtful; and when they hold forth a temptation to increase the number of applicants, and to encourage vice and idleness, they become pernicious. On these principles, foundling hospitals have been already condemned by enlightened philosophers. "Of all the mischiefs," says Lord Kames, "which have been engendered by over-anxiety about the poor, none have proved more fatal than foundling hospitals."

As this opinion directly militates againſt the appropriation which has been made of a conſiderable fund towards the erection of a foundling hoſpital in Edinburgh,* a high degree of local and temporary intereſt is thus attached to an inquiry into the expediency of the meaſure. In a medical publication, its effects on population naturally form the principal object of inveſtigation, but theſe are ſo intimately connected with its influence on the morality and expenditure of the ſtate, that, in inveſtigating the former, frequent reference muſt be had to the latter.

The principal intention of foundling hoſpitals is to preſerve and educate, as uſeful citizens, children which might otherwiſe periſh from neglect or actual violence. Let us examine how far they attain this end. Children are moſt commonly deſerted ſoon after birth; for maternal affection is not yet confirmed by habit, and at that time only can the hopes of concealment act as a motive; when children, at that tender age, are entruſted to the care of the community, the difficulty of rearing them is immenſe. What a feeble, helpleſs being is man at his entrance into this world! Rudely expelled from the womb, in which he received exiſtence, into an ungenial element, his firſt ſenſation is pain, his firſt cry the cry of ſufferance: with a frame tender and delicate, and a mind ſcarcely yet awakened, he is totally incapable of contributing towards his ſupport. Dependent on others for his preſervation, the human infant has little chance of ſurviving, when its numerous wants are not unremittingly ſupplied by maternal affection. In proof of theſe aſſertions, the hiſtory of all foundling hoſpitals may be adduced.

The moſt ancient eſtabliſhment of this kind was inſtituted at Montpellier in 1181, a part of the hoſpital St. Eſprit being ap-

* We, &c. "do finally and unalterably reſolve to apply the free income ariſing from the reſidue of the ſaid eſtate, for the pious and charitable purpoſes of preventing child-murder, and for an hoſpital within the city of Edinburgh, for receiving, ſecretly, infant children, and bringing them up to be uſeful members of ſociety; and by receiving, privately, women big with child, and aſſiſting them in their delivery, ſo as to conceal their ſhame, and taking care of their children as foundlings."—Deed of Deſtination of the Funds of Mr. John Watſon, W. S. 13th Auguſt, 1764.

pointed for the reception of deſtitute children. A ſimilar inſtitution was founded at Lyons in 1533. At that time it was the practice throughout Chriſtendom that an expoſed child remained the ſlave and perſonal property of the perſon who took it up and reared it. In the 17th century, the number of deſerted infants increaſed conſiderably; and in Paris they were found in the ſtreets helpleſs, and left to the mercy of thoſe who choſe to lift them. Their miſerable fate, about 1638, excited the compaſſion of a rich widow, who cauſed them to be brought to her, and reared them in her houſe. For a time, this, like other undertakings of the ſame kind, was attended with ſucceſs; but the moſt ſhocking abuſes ſoon crept in. Her ſervants diſpoſed of theſe children at a fixed price. Many of them were ſold to beggars, who, by diſlocating their joints, and otherwiſe maiming them, endeavoured to increaſe the profits of their ſcandalous trade. In 1640, Louis XIII. to correct theſe and other flagrant abuſes, founded the foundling hoſpital at Paris, the moſt dreadful ſcene of butchery, ſays Girtanner, the world ever ſaw. Liancourt, in his report to the National Aſſembly, aſſerts, that of the children admitted, two-thirds died during the firſt month, and of theſe, three-fifths before they were given to nurſe. Of 101,000 children admitted in the preceding 16 years, in 1790 only 15,000 remained. Before the 2d of George III. the mortality in the London workhouſes was equally great: and Mr. Hanway mentions inſtances of every child received under a twelvemonth dying within the year. In 1791, Sir John Blaquiere ſtated to the Houſe of Commons of Ireland, that of 19,420 infants admitted into the foundling hoſpital of Dublin, during the laſt ten years, 17,440 were dead or unaccounted for; and that of 2180 admitted during 1790, only 187 were then alive. In 1797, he got a committee of the ſame houſe appointed to inquire into the ſtate and management of that inſtitution. They gave in their report on the 8th of May, 1797; by which it appeared that, within the quarter ending the 25th March laſt, 540 children were received into the hoſpi-

tal, of whom, in the ſame ſpace of time, 450 died: that, in the laſt quarter, the official report of the hoſpital ſtated the deaths at three; while the actual number was found to be 203: that from the 25th March to 13th April, nineteen days, 116 infants were admitted; of which number there died 112. Within the laſt ſix years there were admitted 12,786; died in that time 12,651; ſo that, in ſix years, only 135 children were ſaved to the public and to the world. In the Charité of Berlin, where ſome enjoyed the advantage of being born in the houſe, and of being ſuckled by their mothers ſix weeks, ſcarcely a fourth part ſurvived one month. Every child born in the Hotel Dieu of Paris was ſeized with a kind of malignant aphtha, called *le muguet*, and not one ſurvived who remained in the houſe. At Grenoble, of every 100 received, 25 die during the firſt year; at Lyons, 36; at La Rochelle, 50; at Munich, 57; and at Montpellier, even 60. At Caſſel, only 10 out of 741 lived 14 years. In Rouen, one in 27 reached manhood, but half of theſe in ſo miſerable a ſtate, that of 108 only two could be ſaid to be added to the uſeful population. In Vienna, notwithſtanding the princely income of the hoſpital, ſcarcely one in 19 is preſerved. In Peterſburgh, under the moſt admirable management and moſt vigilant inſpection of the Empreſs Dowager, 1200 die annually out of 3650 received. In Moſcow, with every poſſible advantage, out of 37,607 admitted in the courſe of 20 years, only 1020 were ſent out.

In ſome of theſe hoſpitals it is attempted to rear the children in the hoſpital itſelf; in others they are given out to nurſe in the country. Experience has decided in favour of the latter plan: It is leſs expenſive to the ſtate, the mortality is leſs, the children are more likely to become efficient citizens, and ſoon become uſeful to the people to whoſe care they are intruſted. It has, however, been objected, that it is almoſt impoſſible to ſuperintend the treatment of the children, when diſperſed ſo widely; that there is great danger of ſpreading the venereal diſeaſe in the country, by giving out ſyphilitic children to nurſe; and that it

will be impossible to find nurses sufficient, where the foundlings are numerous. These objections, however, are not solid; for it will be more easy to find a sufficient number of nurses who will undertake the rearing of a child in their own houses, than who will immure themselves in an hospital; and if, to save the number and expense of nurses, you commit to the care of each, in an hospital, six, five, or even four children, some of whom are generally diseased, you condemn all to a slow and cruel death. The superintendence of their treatment is of little consequence; for it will be insufficient to prevent it, if the nurses feel not some affection for the child, and where they do, it is unnecessary. The propagation of the venereal disease is the most important objection, and is only to be obviated by careful examination and due precautions, until the health of the child be ascertained. Though attended with these and other inconveniences, this method of assisting these helpless beings is to be preferred; and accordingly we find it sanctioned by the British Parliament, which, in 1761, passed an act for obliging all parishes within the bills of mortality to send all children under six years of age, within a fortnight after they were born in or received into the workhouse, to a distance not less than six miles from London, to be nursed until they are six years of age. Dr. Price allows that this act prevented many deaths, and Mr. Howlett reckons, that a diminution of 2100 burials a year has been occasioned by it. Indeed, in nursing hospitals, the mortality is dreadful, the sufferings of the infants extreme.

The causes of mortality, almost necessarily connected with foundling hospitals, are, insufficient and unhealthy nourishment, want of cleanliness, cruelty and inattention of the nurses, confinement, impure air, and want of exercise. But these causes, say the advocates for such hospitals, may be all removed, and the mortality of foundlings reduced as low as that of infants in general. This, however, is merely the speculation of some enthusiastic philanthropists, and never can be realized, unless a nurse can be procured for every child, and some means be found of

imparting to her the feelings of a mother. The difficulty of procuring nurſes for the hoſpitals has been always ſeverely felt; three, four, five, or even ſix children, are often given to one woman to ſuckle; the whole are conſequently ſtarved and ſhrivelled; and, ſhould one of them be diſeaſed, the whole are ſoon infected. At Marſeilles, it is the cuſtom to keep thoſe girls, who come to the hoſpital to be delivered, two years as nurſes. Several children are allotted to each of them, but, as long as their own children ſurvive, it is eaſy to foreſee what muſt become of the others. Beſides, the dread of ſuch a taſk frightens pregnant girls from entering the hoſpital; and, to this day, the inſtitution has completely failed in its principal object. In England, multitudes of children are brought up on the ſpoon, but all experiments of that nature in public hoſpitals have been unſucceſsful.

"Who can learn theſe facts," ſays Oſiander, "and not be wounded to the ſoul? who think of a foundling hoſpital without horror? It ſeems to be the fate of moſt of theſe unhappy foundlings, that while humanity endeavours to reſcue them from a violent death, it only collects them to protract their miſeries at an enormous expenſe. If we ſearch the records of foundling hoſpitals, we can hardly ſuppreſs the thought that the curſe of the Almighty reſts upon their walls, and that they are the abode of the deſtroying angel.

Children murdered here at the public expenſe,

was inſcribed by a ſatyriſt over the gate of ſuch an hoſpital. Alas! it is almoſt true. What a preventive of child-murder, to ſnatch an infant from the knife, and kill it with ſlow poiſon; for what elſe is the milk of theſe nurſes, and the peſtilential vapour of theſe abodes!"

What then are we to think of the influence of foundling hoſpitals on population? Are we to aſcribe to them the preſervation of the few who ſurvive, or are we to accuſe them of the

deſtruction of the multitudes who periſh? Are we to accede to the eulogium pronounced on that of Moſcow by Mr. Tooke, "That of all the children hitherto brought up in it, not the hundredth part would have been alive but for that inſtitution; and that conſequently, even in times of the greateſt mortality, it preſerves to the ſtate a very conſiderable number of young citizens;" or are we to acknowledge the juſtneſs of the oppoſite opinion of Mr. Malthus, "that if the children received into theſe hoſpitals had been left to the management of their parents, taking the chance of all the difficulties in which they might be involved, a much greater proportion of them would have reached the age of manhood, and have become uſeful members of the ſtate."

The determination of theſe queſtions reſts on this ſingle circumſtance, Whether or not theſe children would have been deſerted, had no ſuch hoſpitals exiſted? Wherever it is conſidered as a crime, and conſequently as a diſgrace, in a parent to deſert her offspring, it will never be done unleſs to avoid greater evils; to eſcape the infamy attached to illegitimate pregnancy, or in conſequence of abſolute want of the neceſſaries of life. In the latter caſe, the crime may be prevented by cautiouſly extending relief, as in other caſes of poverty; but, in the former, the attention of the Legiſlature muſt be directed to the root of the evil, to correct the habits of licentiouſneſs from which it proceeds. Penal laws againſt illegitimate pregnancy will naturally increaſe the deſire of concealment, and the deſire of concealment may lead to the deſertion, or even murder, of the infant; but by operating as a powerful reſtraint on licentiouſneſs, they render the original crime leſs frequent, and probably rather tend to diminiſh than to increaſe its eventual effects. All children deſerted in defiance of ſuch laws, or who become deſtitute by the death or total incapacity of their parents, have a right to the protection of the public; and as many of them as are thereby preſerved, conſtitute an actual addition to the population of the ſtate. But inſtitutions for maintaining them under theſe cir-

cumſtances have no direct tendency to prevent child-murder, and ſhould not be confounded with foundling hoſpitals, properly ſo called, which authorize and facilitate the deſertion of children, with the intention of preventing child-murder. Now, what are the motives which lead to this unnatural crime? Are they not the deſire of concealing illegitimate pregnancy, or of eſcaping the labour of rearing the infant? So far as the latter motive is concerned, foundling hoſpitals operate as a direct tax on induſtry and virtue, and as a direct encouragement to idleneſs and vice; but if child-murder proceeded only from the former motive, foundling hoſpitals would have little effect in preventing it. For illegitimate pregnancy muſt either be infamous or not; in the one caſe, the ſame endeavours to conceal it would be uſed as if no hoſpital exiſted, and, in the other, there would be no deſire of concealment, conſequently no child-murder, from that motive.

But, for the ſake of proſecuting our inquiries, let us admit that foundling hoſpitals are as complete a preventive of child-murder as their advocates ſuppoſe; it is evident, that ſo long as illegitimate pregnancy is conſidered as diſgraceful, ſo long as the deſertion of children is conſidered as infamous, they will have no effect, unleſs the admiſſion into them be ſecret, indiſcriminate, and unlimited. Suppoſe it limited, the hoſpital full, and the baſket removed, what will be the conſequence? The deſertion of children having, till that moment, been authorized, they will be brought as before, depoſited on the ſtreet inſtead of the baſket, and the hoſpital muſt admit them, if they be diſcovered before they have died of cold and hunger. If the admiſſion be not indiſcriminate, the concealment cannot be perfect; and to what claſs of women ſhall its benefits be confined? To the worthleſs? Certainly not. To the unfortunate victims of ſeduction? If it could prevent child-murder, yes. In London, in order to the reception of the child, the previous good character, the preſent neceſſity of the mother, and the deſertion of the father, muſt be inquired into, and whether it will be attend-

ed with the consequence of her being replaced in a course of virtue, and in a way of obtaining an honest livelihood.* Such restrictions are laudable, but they completely exclude those most likely to maintain their reputation at the expense of so enormous a crime.

Wherever the reception is indiscriminate, their effects are pernicious to the morals and happiness of the people, they oppress the industrious by their expense, and they diminish population. The evils they necessarily produce are infinitely worse than those which they are intended to obviate. The dread of illegitimate pregnancy, and its consequences, in the present state of society, is one of the most powerful safeguards of female chastity. Foundling hospitals, by removing in a great measure the fear of these, directly encourage licentiousness, and when pregnancy is the consequence, the infant is almost of course sent to the hospital, and the mother deprived of the best means of atoning for her imprudence, and showing the sincerity of her repentance; means which seldom fail of restoring her reputation, and of ensuring to her, in her old age, the gratitude and protection of the child, whose preservation she accomplished, even at the risk of perpetuating her shame.

But the effects of indiscriminate admission on the morals of the married poor are, perhaps, still more to be dreaded. When we consider the dangers to which the birth of a child exposes the mother, the pains it inflicts, the exertions its maintenance requires from her yet enfeebled frame, the anxiety of mind, numerous inconveniences, deprivations of enjoyment, and augmentation of labour, which, among the lower orders of society, are necessarily connected with its continuance in life, we must immediately be aware of the danger of diminishing the necessity of submitting to these temporary inconveniences and increase of labour. Sir F. Eden, who has investigated the situa-

* Account of the Foundling Hospital, page 62.

tion of the poor with particular attention, obſerves, that "the terror, which poor-houſes and work-houſes create, operates more in preventing grown people from entering them themſelves, than from conſigning the younger part of their family thither. It is perhaps not an unnatural courſe for a mother to abandon her child to the pariſh officers, who, ſhe is aſſured, will provide for it, for ſome years at leaſt, better than ſhe poſſibly could; more particularly when that child is the fruit of an illicit amour, and when, by leaving it at the workhouſe, ſhe can often ſcreen her character from detection. Conſidered in this point of view," he concludes, "the poor laws may be ſaid to offer an encouragement to debauchery."

Foundling hoſpitals, in this way, tend to looſen the ties between parent and child, the chief ſource of happineſs and virtue among the poor, and by holding forth temptations to the idle and indolent, too powerful for their reſiſtance, ſeduce many of them to deprive themſelves for ever of the greateſt conſolations of their lives, and of the ſupport of their old age and infirmities; the community thus drawing on itſelf the ſupport of the parents as well as of the children. "At every occaſional pinch for food, away goes a child to the hoſpital, and parental affection among the lower ſort turns ſo languid, that many who are in no pinch relieve themſelves of trouble by the ſame means."—And many a one, whoſe laſt moments might have been honoured by the tears of a virtuous family, is left to periſh unheeded in a work-houſe cell. "An occaſional child-murder, from falſe ſhame, is ſaved at a very high price, if it can only be done by the ſacrifice of ſome of the beſt and moſt uſeful feelings of the human heart, in a great part of the nation."

But theſe arguments, it may be ſaid, are merely the opinions of ſpeculative philoſophers: let us then bring them to the teſt of experience. In Peterſburgh, the annual births are about 17,550, of whom 3650 go to the hoſpital. In the diſtrict of Moſcow, the total births may be about 49,629, and in 20 years from the

inſtitution of the hoſpital, 37,607 had been admitted into it. In Lyons, in the year 1772—5320 children were born, of whom 977 were ſent to the foundling hoſpital. In the ſame year, the births at Paris amounted to 18,713, of whom 7676 were abandoned to the hoſpital; and of theſe, Buffon clearly proves that more than one half were legitimate children. It is alſo to be remarked, that there is a conſtant increaſe of the proportion of children deſerted. In Paris, the number of foundlings in 1670, 1680, 1700, 1740, 1749, 50, 51, 52, 53, 54, 55, 64, 65, 1772, and 1776, was 312, 890, 1740, 3130, 3775, 3785, 3783, 4127, 4329, 4231, 4273, 5560, 5495, 7676, and 6419, reſpectively. In London, in conſequence of the indiſcriminate admiſſion of children not exceeding two months being ſanctioned, "on the 2d of June, 1756, the firſt day of general reception, 117 children were received. From that time to the 31ſt December, 1757, 5510 children were admitted into the hoſpital;" and the admiſſion would probably, according to Sir F. Eden, have ſoon conſiſted of half the children born within 100 miles of the metropolis, but for the act of 1760.

Theſe facts indiſputably prove, that foundling hoſpitals increaſe the number of deſerted children; and as the mortality among foundlings is greater than among other children, we cannot refuſe our aſſent to the poſition of Mr. Malthus, that "if a perſon wiſhed to check population, and were not ſolicitous about the means, he could not propoſe a more effectual meaſure than the eſtabliſhment of a ſufficient number of foundling hoſpitals, unlimited in their reception of children."* Of thoſe who

* It muſt, however, be remarked, that foundling hoſpitals only diminiſh the actual population *directly*, by increaſing the comparative mortality of the children who are born; *indirectly*, they probably tend to augment the actual population by removing one of its greateſt checks, the care of providing for our offſpring. But this view of the ſubject is the moſt fatal of any to the opinions of thoſe who think foundling hoſpitals deſerving of ſupport, as a means of preventing child-murder; for, in this way, they operate upon the ſame principle as the permiſſion of child-murder, from which it only differs in the enormous expenſe, and protracted cruelty with which they are attended.

survive the hardships to which they are exposed in such places, the greater part are incapable, from bodily infirmity, to support themselves; and, with regard to their morals, Arthur Young has observed, that "foundling hospitals encourage that vicious species of procreation which does not deserve the name of population; that the encouragement afforded by foundling hospitals is an encouragement of vice and inhumanity, and a public premium given to the banishment of the best feelings of humanity."

Another serious evil to be adverted to is, that, after they have been found by experience to be injurious, it is extremely difficult to put a stop to the evils they have introduced. The habit of deserting children, having been once allowed, is slowly renounced by those whose morals it corrupted, and whose industry it has suppressed. On the 9th of February, 1760, a committee of the House of Commons, appointed to inquire into the effect of the indiscriminate admission of foundlings,

"Resolved, That it is the opinion of this committee, that the general admission of all children indiscriminately, under a certain age, into the hospital for the maintenance and education of exposed and deserted young children, to be maintained there at the public expense, has been attended with many evil consequences, and ought to be prevented.

"Resolved, That it is the opinion of this committee, that no children should be received into the hospital for the maintenance and education of deserted young children after 25th March next, to be maintained there at the public expense."

There were at this time above 6000 children on the establishment, almost all of them under five years of age; and, notwithstanding the strong resolutions of the Commons, "six years passed before the number was reduced so low as 4300; and it was not till after the year 1769, that, by apprenticing all who could be placed out, they were reduced below 1000.*"

* Account of the Foundling Hospital, p. 33.

If the facts and arguments already adduced be at all concluſive with regard to the injurious effects of foundling hoſpitals on the population and the morals of the people, it may appear ſuperfluous to have recourſe to any financial argument; but probably few of the advocates for foundling hoſpitals are at all aware of their enormous expenditure, or how many extenſive and unequivocally uſeful charities it would be ſufficient to ſupport.

The foundling hoſpital at London, from its commencement to December, 1757, placed out only 105 perſons to do for themſelves, in return for an expenſe of 166,000*l.* being 1571*l.* each perſon! In 1760 it required an income of above 45,000*l.* for its ſupport; and its total expenſe for the ten years preceding 1770 could not be leſs than 525,000*l.* of which 495,000*l.* were granted by Parliament. In 1753 its income was only 1050*l.* and its expenſes 5000*l.* Beſides a tax of 1s. 4d. a pound on the rent of houſes in Dublin, the Iriſh Parliament has at different times granted 158,696*l.* towards the payment of the debts of the foundling hoſpital in Dublin. From a foundling hoſpital in a reſpectable German principality, after twenty years perſeverance, only one foundling reached the years of manhood, at an expenſe to the ſtate of 20,000 dollars; a greater ſum, ſays Girtanner, than would have been ſufficient for the education of its hereditary prince. The current expenſes of the Peterſburgh hoſpital are, according to Malthus, 150,000*l.* annually.

From this inquiry it evidently appears, that foundling hoſpitals are hurtful in every point of view, whether we conſider their effects on the morals, population, or expenditure of the ſtate; and that, whatever objections may exiſt to the abolition of thoſe already eſtabliſhed, the Legiſlature, conſiſtently with their reſolutions of 1760, ought not to permit oſtentatious or miſtaken charity to introduce into any part of theſe kingdoms an evil of ſuch magnitude.

An Account of the Diſcovery of the Compoſition of Muriatic Acid. By Professor Pacchioni, *of Piſa. In a letter from* Fabbroni *of Florence.*

"A BRILLIANT diſcovery has been made by one of my friends. I have encloſed an account of it, which you will tranſmit to my reſpectable and dear friend Kirwan, after having communicated it to the philoſophers of your country through the medium of your Journal." We therefore gladly take this means, though ſomewhat irregular, of complying with his requeſt, and of giving to our readers the earlieſt poſſible notice of the diſcovery alluded to, by tranſlating the pamphlet in which it is announced.

Lettera del Dottor Francesco Pacchioni, *Profeſſore di Fiſica nell' Univerſita di Piſa, al chiariſſimo Sig. Auditore* Lorenzo Pignotti, *Conſultore et Iſtoriografo Regio.*

"To you, my much reſpected friend, both on account of the ſpontaneous impulſe of innate kindneſs with which you deigned to take ſo much care of my talents, ſuch as they are, as to receive me among the number of your pupils, and on account of your having paved the way for my obtaining that very chair which was filled by you for many years with ſo much applauſe and honour to our country, rather than to any other perſon, ſhall I give an account of a diſcovery which I have made and ſatisfactorily verified. But theſe are not the only reaſons by which my conduct is influenced. I wiſh, at the ſame time, to ſhow my gratitude towards you, and to give you a proof that I am endeavouring to render myſelf more worthy of your eſteem and friendſhip.

"It is perfectly known to you that, ſince laſt year, on account of the premiums propoſed by that excellent general and philoſopher Bonaparte, Emperor of the French, for the advancement of that new and fertile branch of experimental philoſophy diſ-

covered by the celebrated Profeſſor of Bologna, Galvani, and afterwards wonderfully extended by the ſublime genius of Volta, I have contrived a great number of experiments, which I have performed with much care, and almoſt completed. Theſe experiments have revealed to me many facts, which I am collecting for a memoir to be preſented to the *Societa Italiana;* and have led me to a knowledge of the conſtituent elements of an acid which has hitherto proved refractory to all the efforts of chemiſtry. I ſpeak of the muriatic acid, hitherto tortured in vain* with the electric ſpark, caloric, and all the play of affinity. You are perfectly acquainted with the different and diſcordant opinions of the moſt recent and approved writers concerning the nature of this acid; ſome of them conſidering it as a ſimple combuſtible body, others as formed of an unknown baſe combined with oxygen, and, laſtly, others as a ſimple ſubſtance naturally acid. But theſe opinions have not contributed to the advancement of ſcience, and are juſtly eſteemed as mere hypotheſes deſtitute of proof.

Having, however, neglected theſe hypotheſes, and conſidered the means by which the diſcovery of the nature of this acid has been hitherto attempted, it appeared to me that one had not yet been tried, viz. the continued action of the pile of the celebrated Volta, and I ſuſpected that it might aſſiſt in leading me to diſcoveries which had hitherto eſcaped the reſearch of experimental philoſophers. As far as I can judge, my endeavours have been crowned with ſucceſs, and have furniſhed me with ſatisfactory evidence of the nature of the conſtituent principles of muriatic acid.

The ſimplicity of the apparatus, and of the means adopted to attain my views, the care with which I endeavoured to avoid

* Prof. Pacchioni could not poſſibly know that his diſcoveries had been in ſome meaſure anticipated by Mr. Peel at Cambridge.

every source of error, have, I hope, sufficiently secured me against those illusions which frequently deceive young men ardent in the pursuit of science, and even those practised in the art of extorting from nature her secrets. Want of time prevents me from relating the series of experiments by which I arrived at the discovery I have mentioned; but you may see it by perusing the manuscript of my memoir, which will be immediately published, to submit my researches and their results to the judgment of the learned. For the present, I shall select from the experiments and facts therein described those which are decisive, and which establish, in an evident manner, the following truths:

I. *Muriatic acid is an oxide of hydrogen*, and consequently composed of hydrogen and oxygen.

II. *In the oxygenated muriatic acid, and therefore*, a fortiori, *in muriatic acid, there is a much less proportion of oxygen than in water.*

III. *Hydrogen is susceptible of very many and different degrees of oxidation*, contrary to what is universally believed by pneumatic chemists, who assert that hydrogen is susceptible only of one invariable degree of oxidation, that in which it forms water.

Having at first examined the phenomenon of the decomposition of water by the Galvanic pile, and having, by accurate experiments, ascertained the true theory, I readily discovered a very simple and exact apparatus, in which I could distinctly perceive the changes which happen to water, which, from the continued action of the Galvanic pile, is continually losing its oxygen at the surface of a wire of very pure gold immersed in it.

I therefore proceeded to examine these gradual changes of water thus losing its oxygen, and I at last observed a very singular fact, which unequivocally indicated the formation of an acid. In other antecedent experiments, I had examined the nature of the air obtained before arriving at this remarkable point, and I always found, by means of the eudiometer of Giobert, that it

was very pure oxygen,* as the reſiduum ſcarcely amounted to one ſixtieth.

Having thus examined the nature of the air formed in various experiments from the firſt moment of decompoſition, until there were evident indications of the formation of an acid, I began to endeavour to determine, in a more poſitive manner, the exiſtence and nature of this acid.

When the water, or to ſpeak more accurately, the reſidual fluid, occupied about half the capacity of the receiver, which at firſt contained the water, this reſidual fluid preſented the following characters.

Its *colour* was an orange yellow, more or leſs deep, according as the bulk of the reſidual liquor was greater or leſs, and it reſembled in appearance a true ſolution of gold.

From the inferior orifice of the veſſel, which was cloſed with a piece of taffety, and then with double bladder, there eſcaped a *ſmell* which was eaſily recogniſed to be that of oxygenated muriatic acid.

The gold wire had in part loſt its metallic luſtre, and its ſurface appeared as if corroded by a ſolvent.

The bit of taffety which had been in contact with the coloured fluid, in conſequence of its action, was eaſily torn, as is uſual with ſimilar bodies when half-burnt (ſemicombuſto.)

Around the edges of the veſſel, on the bladder, there was formed a deep purple ring, which ſurrounded a circular ſpace rendered entirely colourleſs, or white.

A drop of this fluid tinged the ſkin of the hand, after ſome hours, with a beautiful roſe colour.

Having obtained, in various ſucceſſive experiments, the ſame liquid, poſſeſſing conſtantly the ſame properties, I choſe that ob-

* In all experiments we are acquainted with, hydrogen gas was always evolved; but as we have no information concerning the arrangement of Prof. Pacchioni's apparatus, we cannot adduce this fact as concluſive againſt the accuracy of his experiments.—*Edinb. Editors.*

tained in the laſt experiment to ſubject it to chemical examination. The very able chemiſt of this univerſity, Sig. Giuſeppe Branchi, had the goodneſs to enter zealouſly into my views, and in his laboratory we eaſily proved,

1. The exiſtence of a volatile acid by the white vapours, which were formed by ammonia placed near it.

2. That this acid was certainly oxygenated muriatic acid, ſince it formed in nitrate of ſilver a curdy precipitate, the luna cornea of the ancients, or the muriate of ſilver of the moderns. From theſe facts we may draw the following poſitive and undeniable reſults:

1. Muriatic acid is an oxide of hydrogen, and is therefore compoſed of hydrogen and oxygen.

2. Oxygenated muriatic acid, and of courſe muriatic acid, contains leſs oxygen than water does.

3. Hydrogen has not one degree of oxygenation, but many. One of theſe conſtitutes water, another below it oxygenated muriatic acid, and, below this, there is another which conſtitutes muriatic acid.

I ſhall mention the other degrees in another memoir, which will be publiſhed immediately.

Theſe, my much eſteemed friend, are the deciſive facts and experiments which exclude every doubt, and which confirm my fortunate conjectures. It is long ſince experimental philoſophy may be ſaid to have become a ſource of wonders. The tranſmutation of azote into nitrous acid, and of hydrogen into water, appear to me truly wonderful, and your genius will enable you readily to judge whether the ſame epithet may be applied to the metamorphoſis of water into the true ſolvent of gold and platinum, into that volatile ſubſtance which attacks and neutralizes peſtilential miaſmata, and preſents ſo many reſources to philoſophy and the arts.

After having thus diſcovered the elements of this refractory ſubſtance, I am engaged in determining their proportions by experiment and calculation.

To me it appears that the origin and nature of muriatic acid being now known, there is no longer any mystery in its formation, nor in that of the muriatic salts in the vast extent of the ocean. But these and other deductions will be explained by me in another place. They will have already occurred to you, and I should exceed the limits of this letter, if I were to enter farther into the subject. With the most profound esteem and sincere attachment, I have the honour of subscribing myself

Your much obliged servant and friend,

FRANCIS PACCHIONI.

Pisa, 9th May, 1805.

Contrary as the results announced in this interesting communication are to analogy, there are some facts from which they receive at least such a degree of confirmation, as to entitle them to the attention of every one zealous in the cultivation of science. In 1801, Mr. Cruickshank discovered that infusion of litmus was reddened by the one end of the pile, and infusion of Brazil wood rendered purple by the other; but he supposed these effects to be owing to the formation of nitrous acid and ammonia; and only a few days before Prof. Pacchioni's letter was published at Pisa, the formation of muriatic acid by the Galvanic action was announced in London,* in a letter from from Mr. Peel, dated Cambridge, 23d April, 1805; which is as follows:

To Mr. Tilloch.

Cambridge, April 23, 1805.

Sir,

I take this opportunity of laying before the public, through the medium of your magazine, if you think it worthy a place in that work, the following experiment.

* Philosophical Magazine for April 1805, p. 279.

I took about a pint of distilled water, and decomposed one half of it by means of Galvanism; the other half I evaporated, and I found to remain at the bottom of the glass a small quantity of salt, which, upon examination, proved to be muriate of soda, or common salt.—What induced me to try the experiment was this: I knew that when water was decomposed by means of Galvanism, the water near one of the wires had alkaline, while that near the other had acid properties. This being the case, I inferred, that if an alkali and an acid were really produced, I should by decomposing a large quantity of water obtain a small quantity of some kind of neutral salt—as was actually the case on trying the experiment. The salt could not have been contained in the water before I made the experiment, because I used every precaution to have it free from impurities. I even took the trouble to repeat the experiment, though a tedious one, and again obtained the same result, &c. &c.

Yours, &c. &c.

WILLIAM PEEL."

P. S. A friend of mine just informs me that he has tried my experiment, and has succeeded in procuring the salt."*

Goettling's new process for decomposing Sulphate of Baryta, in order to prepare the Muriate of that Earth; with a mode of preparing the Muriate.

Four parts of native sulphate of Baryta in fine powder are to be mixed with one part of muriate of soda, and half a part of charcoal powder.—This mixture is to be pressed hard into a

* The Editor of the Philosophical Magazine suggested to Mr. Peel, that his investigation might be more interesting if he would use water for his experiments composed from its elements—Hydrogen and Oxygen.

In a subsequent letter Mr. P. acquaints Mr. Tilloch, that an experiment conducted as desired—gave a residuum of muriate of potash.

Hessian crucible, and exposed for an hour and a half to a red heat, in a good wind-furnace. After it has grown cold, the mass is to be reduced to a coarse powder, and boiled for a moment with sixteen parts of water; the liquor is then to be filtered, and kept in well stopped bottles.

The time of exposure to heat may be shortened one half, if the quantity of muriate of soda be doubled, and the matter occasionally stirred. In this case, too, double the quantity of water should be used to lixiviate the mass.

To prepare muriate of baryta with this lixivium of sulphuret of baryta, which at the same time holds in solution muriate of soda; muriatic acid is to be added in separate portions till sulphurated hydrogen gas is no longer extricated. The liquor is then to be filtered, a little hot water is to be poured on the residuum, and the liquor is to be evaporated to a pellicle. The lixivium being then filtered afresh, is to be set to crystallize; the muriate of soda, which is much more soluble in water than the muriate of baryta, and not more soluble with heat than without, is not deposited by cooling, and the muriate of baryta, crystallizes alone.

The remaining lixivium is to be evaporated and set to crystallize again, and this is to be repeated till no more crystals of muriate of baryta are formed.

The different products of the crystallization should be mixed together, dissolved and re-crystallized.

Tilloch.

Aya-Pana.

Bory de St. Vincent, in "his voyage aux principales Iles des Mers d'Afrique," relates, that the captain of a Danish ship, in the year 1798, first brought this plant from Brazil to the Isle of France, as a panacea. It was immediately used against all kinds of diseases, and he extols its wonderful effects, that it removes consumption of the lungs, and that it was employed in the Isle of France, as the surest means against the bite of serpents; yet

it is known, that no ſerpents are to be found in either of the Maſcarhenas. "All errors," ſays Bory, "continue only for a time. This quackery alſo has ceaſed; the aya-pana is as little a panacea as the German "Forget me not." Bory himſelf took the infuſion of 30 leaves, for a catarrh, without the leaſt effect. People in the Iſle de France remember the aya-pana only to laugh at the follies related of this plant, and the Charlatan who introduced it is forgotten.

Ibid.

Account of the Method of ſupplying Artificial Noſes; as practiſed by the Natives of the Malabar Coaſt.

MOST of our readers have, no doubt, heard of the formation and adaptation of artificial noſes. In Europe this operation has been generally conſidered as viſionary, and has afforded a fine theme for the ridicule of ſome of our wits of the firſt order. For example, Addiſon, Steele, and Pope have not overlooked the art of famed Taliacotius. This art, it appears, is actually practiſed, and with great ſucceſs, in the weſtern parts of India, by a caſt of Hindoos, called Kamoos. An account of their method of performing this operation appears in a paper publiſhed in the Bombay Courier of the 4th April, 1795, which we have extracted for the information of the curious:

"It is much to be lamented that the Europeans, whoſe talents have been devoted to the literature of India, have applied themſelves rather to the ſpeculative than to the practical parts of knowledge; and that their diſcoveries, however meritorious, have been more curious than uſeful.

"Although we cannot agree with thoſe who look to India as the ſource from whence Europe has derived every thing that

is valuable in science, yet we must allow that it has been the fountain of much of our knowledge; and that the common practice of the necessary arts of life among an ancient people would yet afford us not a little instruction.

"The progress that has been made in surgery for several centuries past in Europe makes it little probable that any improvement could be expected from the natives of this country; but we think, that in two operations we may still receive instruction. The first of these is the depression of the Chrystalline lens, when it becomes opake; and the second, the formation of noses. We may also remark, that with instruments far more imperfect than ours, they perform the operation of lithotomy in the very place which, by the consent of modern surgeons is esteemed the best.

"The Hindoos certainly deserve the praise of making artificial noses in a superior way to any people in the world; an art, unfortunately for them, the more necessary, as in no part of the world is the practice of cutting off noses so common. The process of repairing them was recommended in Europe about three hundred years ago, and was said to have originated with the Calabrians, from whom it was received by the surgeons of Bologna.

"The celebrated Taliacotius, so unjustly exposed by some of our wits to ridicule, wrote a volume of those unions of living matter, under the title of "*Chirurgia curtorum per Insitionem Membrorum.*" We have never had access to this work; but we have reason to think, from the following extract from *Fabricius ab Aquapendente*, that the operation in Europe was much inferior to the one in use in this country.

'Si verò portio nasę cartilaginea ex toto amputetur, insanabile hujusmodi est vulnus. Ne tamen tanta ex abciſſo naſo in facie appareret deformitas ars excogitavit reparare amiſſum naſum, et primi, qui modum reparandi naſum calluesi fuerunt Calabri, deinde devenit ad Medicos Bonopienſes. Est tamen modus adeo

laboriosus, difficilis et longus, ut Ii qui huic se submiserunt si rursus indigerent nasi reparatione, non amplius se submitterent. Fit scarificata portione pinnæ nasi, deinde incisa cute bracchii respondentis majori portioni nasi deperditæ, et applicata cute atque consuta cum parte scarificata nasi; bracchium postea capiti alligatur, ita ut neque hinc neque inde unquam dimoveatur, quia si moveretur, non fieret agglutinatio. Facta glutinatione, iterum scarificatur nasus aliis scarificationibus, et frequentibus, adeo ut Caro rubea appareat, et cicatricis reliquia non appareant, tum vicina bracchii portio inciditur et apponitur, naso et consuitur, atque hoc toties repetitur et afficitur, quousque totus nasus fuerit scarificatus, et cutis bracchii ex toto fuerit bracchio ablata, et naso agglutinata. Multas animadversiones in hujusmodi curatione proponerem nisi scirem hujus rei professorem magnum volumen in lucem dedisse.'

"From the above curious passage it will be observed, that the object could not be effected until an adhesion had taken place between the arm and the mutilated nose; and we may readily conceive, that an operation so long and painful would soon fall into disuse.

"We have seen a letter from Mr. Lucas, an ingenious surgeon of Madras, describing very particularly the operation of putting on noses, which in one case he himself performed with success. This differs but little from the Indian method practised by the Koomas, a cast of Hindoos; with which, as it has been ably described by a gentleman who witnessed the process, we shall conclude these observations.

"Some religious ceremonies are first performed: beetel and arrack put into the patient's hands, he is then laid upon his back, his arms stretched along his sides on the ground, he is ordered, on no pretence whatever, to raise his arms during the operation; and they impress him with the idea, that it cannot be successful unless he complies strictly with these injunctions. A plate of wax being previously formed into the shape of the defective nose, it is flattened and laid obliquely upon the fore-

head, ſo as to avoid the hairy ſcalp. The alæ and ſeptum of the artificial noſe being placed upwards, the other extremity of it terminating at the indentation of the oſſa naſi with the os frontis, the operator marks out a portion of integuments equal to the ſize of the flattened wax, and then diſſects it from the pericranium, leaving a ſmall ſlip undivided between the eye-brows, to preſerve the circulation in the detached piece until an adheſion takes place between it and the ſtump of the noſe. He then cuts or pares off the cicatrix from the ſtump of the noſe; and immediately behind the inciſion he makes an inciſion, into which the edge of the integuments are to be grafted or inſerted.

"As there remains a ſlip of teguments between the eye-brows undivided, the detached portion, when turned down, is twiſted half round; ſo that its recent ſurface may be applied to the face of the ſcarified ſtump, and the edge grafted into the above-deſcribed inciſion, which extends along both alæ to the ſuperior part of the upper lip; a tranſverſe inciſion is alſo made in the ſuperior part of the upper lip, into which the ſeptum is inſerted. Thus carefully grafting or inſerting the ſcalp, it is kept exactly in this ſituation by a cement, called in this country *Kitta*, which is ſoftened with a little water, and ſpread on long narrow bits of cotton cloth; five or ſix of which are applied over each other upon the junction which forms an irregular triangle. The dreſſing for the wound on the forehead is pieces of cloth dipped in ghee; the patient is deſired to lie on his back five or ſix days. Four days after the operation the cement is removed, and the junction only covered with cloth moiſtened in ghee or oil, which is renewed every day: neither ſtitches, ſticking plaſter, compreſs, nor bandages, are required. About ten days after the operation, round doſſils, made of ſoft old cloth, are introduced into the noſtrils to prevent them from contracting too much, which would happen if this precaution were neglected.

"The connecting ſlip of integuments is generally divided about the twenty-fifth day; and on this occaſion ſome more

diſſection is neceſſary, to effect an exact union, and to leave as little ſeam as poſſible on the ſuperior part of the arch of the noſe. *Europ. Mag.*

On the mode of detecting Arſenic in thoſe poiſoned thereby, &c. &c.

'Phyſicians and ſurgeons are ſometimes called upon, in caſes of ſuppoſed murder by arſenic, to give their opinion; and the queſtions commonly put to them are theſe:

'1. Whether the appearances or ſymptoms obſerved in the dying and dead perſon give reaſon to conclude that they were killed with arſenic?

'2. Whether certain drugs or powders which were given to the dead perſon, or mixed with his food, and a part of which are committed to the phyſician to be examined, be arſenic, or contain arſenic?

'It is neceſſary to be cautious in giving our anſwer to the firſt queſtion, which ſeldom admits of a perfectly deciſive anſwer, if the preſumption of poiſon reſts on the ſymptoms alone; the ſymptoms produced by arſenic being not unlike to thoſe which appear in ſome diſeaſes, ſuch as the cholera. But theſe ſymptoms may add to the proof which may ariſe from other evidence.

'The ſymptoms produced by a dangerous doſe of arſenic begin to appear in a quarter of an hour, or not much longer, after it is taken. Firſt, ſickneſs, and great diſtreſs at the ſtomach, ſoon followed by thirſt, and burning heat in the bowels. Then come on violent vomiting, and ſevere colic pains, and exceſſive and painful purging. This brings on faintings, with cold ſweats, and other ſigns of great debility. To this ſucceed painful cramps, and contractions of the legs and thighs, and extreme weakneſs, and death.

'After death, the inteſtines are found inflamed and corroded; and ſometimes inflammation and eroſions of the anus happen before death.

'In examining the dead body, we muſt take care that we be not deceived by the diſſolution of the ſtomach by the gaſtric liquor, and account it an indication of arſenic.

'If we actually find arſenic in the ſtomach or inteſtines, or in the drugs or other ſuſpected matters which were given to the dead perſon, we can give a deciſive anſwer to thoſe two queſtions. But we muſt make ourſelves ſure that what we judge to be arſenic is really ſo.

'We muſt, therefore, take care to be well acquainted with the qualities of arſenic, by which it is diſtinguiſhable from all other ſubſtances. And its diſtinctive properties are theſe:

'1*mo*, It is a heavy ſubſtance, which may therefore be ſeparated by ſkilful elutriation from animal or vegetable matter with which it may happen to be mixed in the bowels or in the drugs. Elutriation is commonly performed with water; but if the arſenic is mixed with oily or reſinous drugs, it may be performed with alcohol. In examining the dead body, therefore, it may be proper to waſh out the whole contents of the ſtomach and bowels into a baſin of water, and then, by careful elutriation, to try if any arſenic can be found in them. And in examining the drugs, if they are a mixture of different ingredients, we muſt dilute or diſſolve them, by grinding them a little with water or ſpirits, and then elutriate.

'2*do*, Arſenic, beſides being a heavy ſubſtance, is volatile. When heated on a red hot iron, it evaporates totally before it be red hot, and goes off in white ſmoke.

'3*tio*, It is eaſily metallized by mixing it with three times its weight of the black flux, and heating the mixture in a tube.

'4*to*, In this metallized ſtate, it eaſily penetrates copper, when aſſiſted by heat, and gives to the copper a whitiſh colour like that of lead or tin. It muſt be made of a dull red heat. This will completely diſſipate corroſive ſublimate, or other things which can whiten copper.

'5to, In its metallized ſtate, if it be ſuddenly heated to a ſufficient degree on a red hot iron, it takes fire, and burns with a flame, from which ariſes a ſmoke, which is white arſenic. Or, if the iron be not ſufficiently hot to make it take fire, it ſimply evaporates, and gives vapours which have an odour like that of garlic. The ſame odour is perceived, if we mix white arſenic with an equal weight of charcoal duſt, and throw a little of the mixture on a burning coal, or on iron ſtrongly heated, ſo as to ſet the charcoal duſt on fire. This experiment has been often miſunderſtood.

'Having had occaſion ſome time ago to exerciſe myſelf in theſe experiments, and to try with how ſmall a quantity of arſenic they might be made, I found I was able, by means of a ſmall tube, to get metallized arſenic from one grain weight of white arſenic; and with this metallized arſenic I made the other experiments.

'*Remedies to ſave, if poſſible, the life of a perſon who has taken Arſenic.*

The firſt ſymptoms which the arſenic produces ſhew plainly, that, for ſome time after it is taken, it acts on the ſtomach and inteſtines as an highly irritating, inflammatory, corroſive ſubſtance. But if the patient ſurvives the firſt violent effects, the poiſon being evacuated out of the bowels, the ſymptoms which appear afterwards are thoſe of exceſſive debility, and a great irritability of the inteſtinal canal, and of the whole ſyſtem. The degree of debility is particularly remarkable. It not only is evident from the languor, diſtreſs, and feebleneſs of the patient, but alſo from the ſtate of the pulſe. I never felt a more feeble pulſe than that of a perſon in this ſituation. All this is attended with a ſort of paralytic affection of the limbs, and a degree of maraſmus.

'The method commonly recommended to ſave the life of the perſon in the firſt of theſe ſtates is, to give plenty of milk

and oil, as obtunding remedies, and which help to waſh and carry off the arſenic out of the inteſtines, while vomiting and purging continue.

'A better practice, however, might be ſubſtituted for this. Arſenic, being a heavy ſubſtance, is not eaſily waſhed out by milk, and it may probably coagulate the milk by its acidity. Oil will not mix with it after it is wet. I ſhould prefer mucilage, taken in large quantities; and if it do not paſs off quickly, I would promote its paſſage by means of a purgative, ſuch as Glauber's ſalt, or ſal catharticus amarus. A friend of mine once gave whites of eggs with ſucceſs.

'In the ſecond ſtage of the diſorders produced by arſenic, which is commonly of long duration, a mild diet of milk is proper. The frequent uſe of opiates, to relieve from conſtant diſtreſs, and after ſome time electricity, are very ſerviceable. De Haen found electricity one of the beſt remedies for the cure of the diſorders occaſioned by lead. Mineral waters have been recommended, eſpecially the ſulphurous waters; and to imitate theſe, hepar ſulphuris diſſolved in water may be employed. But this practice is founded upon project and ſpeculation, not upon experience.' *Black's Elements of Chemiſtry.*

Correction of the ill Flavour of Malt Spirits.

The flavour of malt ſpirits is ſaid to be greatly improved, and made to reſemble that of French brandy, by immerſing in it, for a fortnight, a mixture of finely powdered charcoal and ground rice, in the proportions of $3\frac{1}{2}$ ounces of the former, and $4\frac{1}{2}$ of the latter, to a quart of the ſpirit. The mixture muſt be frequently agitated, and afterwards ſtrained.

Med. & Chirurg. Review.

Method of reſtoring Eſſential Oils that have become thickened and rancid.

The volatile eſſential oils frequently loſe by age their fluidity, together with the greateſt part of their peculiar fragrance. Theſe, it has been diſcovered, may be perfectly reſtored by the following ſimple proceſs. To four ounces of the ſpoiled oil add two drachms of ſulphuric æther. Digeſt them together for a few days, and then diſtil with pure water. The oil comes over perfectly limpid, and with its peculiar odour reſtored. A quantity of reſinous matter remains behind in the ſtill.

In this operation *M. De Roover* ſuppoſes that the æther recompoſes the oil by tranſmitting its hydrogenous principle to the oily baſe. *Ibid.*

Tincture of Tobacco.

The following formula of a tincture of tobacco is ſtrongly recommended by Mr. Noble in his treatiſe on Ophthalmy, for the alleviation of the pain in the temple, which frequently is a moſt diſtreſſing ſymptom in this complaint.

℞. Fol. Nicotianæ incis. lb. i.
Camphoræ, ℥4.
Spiritus Vini rectificati.
Aquæ diſtillatæ, ana, lbs. ij.

A drachm or two is to be rubbed on the pained part with the finger, and repeated occaſionally. *Ibid.*

Saline draught.

The following formula for a ſaline draught, is recommended by Dr. James Hamilton of London, as being equally agreeable, and in ſome caſes more efficacious than the one in general uſe compoſed of carbonate of potaſs and citric acid,

the citric acid is often ſcarce; ſometimes impure, and expenſive; the ingredients of the other are always to be had, they are cheap, and never vary in quality.

℞. Sub-boras Sodæ gr. xv.
Super-tartris potaſſæ ʒſs.
Solve terendo in mortareo cum lact. amygd. ʒx.
Dein adde ſyr. ſimpl.—aq. cinnam. a. ʒi. ft. hauſt.

Med. & Phys. Journal.

On the Uſe of the new Metals in the Practice of Phyſic.

Of the twenty-one metals now known, only one half are employed as medicines; viz. ſilver, mercury, tin, iron, lead, copper, zinc, antimony, biſmuth, and arſenic. As theſe are all powerful remedies, it is rather ſurpriſing that trials have not been made of the reſt. Gold, indeed, has been uſed, but I think not fairly. Platina, cobalt, nickel, manganeſe, uranite, titanite, tellurite, molybdæna, tungſten, chromite, have not, that I have heard, been uſed at all. Two of them which I have tried (platina and manganeſe,) differ totally in their effects.

Platina.

The oxide of platina, precipitated by ſal ammoniac from its ſolution in nitro-muriatic acid, is, when dried, of a yellow and orange colour. This oxide, in doſes of one to three grains, occaſioned vomiting, in the ſame manner as tartrite of antimony. In ſmaller doſes I found no ſenſible effect, except their ſometimes purging and creating ſickneſs.

Manganeſe.

I uſed two preparations of this metal: the *white oxide* precipitated from its muriatic ſolution by fixed alkali; and the phoſphate of manganeſe, precipitated from its muriatic ſolution in water by phoſphate of ſoda, which affords a light blue powder when dried.

1. The white oxide was borne on the ſtomach without ſickneſs, or vomiting, or pain; in full as large doſes as can be borne of precipitate of ſulphate of iron by fixed alkali; viz. in doſes of ten grains, or more. As far as my trials extended, the effects were much the ſame as thoſe of oxide of iron.

2. The phoſphate of manganeſe was borne in the ſame doſes as the above, and with the ſame effects.

The other new metals I have not exhibited: but it may be uſeful to mention, that the beſt (becauſe taſteleſs and leaſt irritating) preparation of copper, is phoſphate of copper, precipitated from ſulphate of copper by phoſphate of ſoda. And phoſphate of ſilver, precipitated from nitrate of ſilver by phoſphate of ſoda, is a moſt admirable hydragogue purgative in dropſies. A grain or two is ſufficient, and is better than Boerhaave's Lunar Pill.

Phoſphate of iron is a better medicine than ſulphate of iron, and is prepared by precipitating it from the ſulphate by phoſphate of ſoda. It may be given in doſes of from ten to fifteen grains.

In fact, moſt of the phoſphates of metals are the preferable preparations. *Med. & Chirurg. Review.*

Extraordinary Inſtance of univerſal Anchyloſis.

M. *Percy*, a ſurgeon in chief in the French army, read a memoir lately, to the *National Inſtitute*, on the affection mentioned above. After having mentioned ſome other inſtances of a ſimilar kind, related by different authors, he proceeds to recite the caſe he himſelf witneſſed, and which was that of an officer, who had contracted in the field a gouty rheumatiſm that deprived him in ſucceſſion of the uſe of his fingers, hands, and feet; and, after exceſſive pains, deſtroyed all power of movement, even of the lower jaw, and bereaved him alſo of ſight. He paſſed ſeveral years in an elbow chair, without obtaining a moment's ſleep, notwithſtanding the largeſt doſes of opium. Being re-

duced at length to ſucking only a little broth or wine through the very ſmall opening which was naturally between the teeth, two of the inciſors were removed, which enabled him to ſpeak with more freedom, and to ſuck liquid through a reed, and even to ſwallow a ſmall quantity of minced meat.

The body of the miſerable ſufferer was a ſort of ſtatue or living corpſe, and formed, as it were, a ſingle piece: all the bones were ſoldered together. Notwithſtanding, he was lively in converſation; his phyſiognomy was full of expreſſion, and even of hilarity. The muſcles of his face had acquired a ſingular degree of mobility; they were continually in action, either to ſupply the want of geſtures, which he was unable to make, or in order to contract the ſkin, and drive away inſects that accidentally lodged on it. The patient at length died, and the ſkeleton is preſerved in the collection of the *Ecole de Medecine*.

Ibid.

An Inſtitution for inveſtigating the nature and cure of CANCER *has lately been planned in London, and ſome progreſs made towards its eſtabliſhment.*

In order to collect all that is at preſent known on the ſubject of *Cancer*, and to extend the circle of probable information, it is propoſed that a correſpondence ſhall be opened with medical men of ſcience and experience, not only in the United Kingdom, but in the colonies, and every part of the continent.

The information particularly wiſhed for may be collected from the following liſt of *Queries*, which has been circulated amongſt the members.

Queries.

I. What are the diagnoſtic ſigns of a CANCER?

II. Does any alteration take place in the ſtructure of a part preceding that more obvious change which is called CANCER? if there does, what is the nature of that alteration?

III. Is CANCER always an original and primary diſeaſe, or may other diſeaſes degenerate into CANCER?

IV. Are there any proofs of CANCER being an hereditary diſeaſe?

V. Are there any proofs of CANCER being a contagious diſeaſe?

VI. Is there any well-remarked relation between CANCER and other diſeaſes? if there be, what are thoſe diſeaſes to which it bears the neareſt reſemblance in its origin, progreſs and termination?

VII. May CANCER be regarded at any period, or under any circumſtances, merely as a local diſeaſe? or does the exiſtence of CANCER in one part afford a preſumption that there is a tendency to a ſimilar morbid alteration in other parts of the animal ſyſtem?

VIII. Has climate or local ſituation, any influence in rendering the human conſtitution more or leſs liable to CANCER, under any form, or in any part?

IX. Is there any particular temperament of body more liable to be affected with CANCER than others? And if there be, what is that temperament?

X. Are brute creatures ſubject to any diſeaſe reſembling CANCER in the human ſubject?

XI. Is there any period of life abſolutely exempt from the attack of this diſeaſe?

XII. Are the lymphatic glands ever affected primarily in CANCER?

XIII. Is CANCER under any circumſtances ſuſceptible of a natural cure?

XIV. Does CANCER ever attack the human frame previouſly to the age of puberty?

XV. Is there any branch of manufacturers either more or leſs ſuſceptible of the diſeaſe?

XVI. Does CANCER ever attack ſeafaring people?

XVII. Are widows or virgins more ſuſceptible of the diſeaſe than married women?

XVIII. In examining the bodies of thoſe who die from confirmed CANCER, what are the appearances of the uterus?

Ibid.

The Action of the Spleen inveſtigated by the Effects following its Extirpation.

M. M. *Le Clerc* and *Dupuytren*, Members of *l'Ecole de Medecine*, of Paris, obſerved, in a dog, whoſe ſpleen had been extirpated, the bile to be ſeparated more rapidly than uſual, with a copious vomiting of liquid matters. Another dog, ſubjected to the ſame operation, and who ſurvived it for the ſpace of fifty days, ſecreted little bile; but the liver was found exceedingly enlarged, and its weight, compared with that of the whole body, was as 1 to $14\frac{1}{4}$; whilſt in the ſame animal in health, the proportion is as 1 to $29\frac{1}{4}$. *Ibid.*

On the Preparation of the Red Oxide of Mercury (Hydrargyrus Nitratus Ruber, or Red Precipitate.)

M. *Fiſcher* has pointed out a ready and economical mode of preparing the red oxide of mercury, which deſerves notice. In the common method of forming this ſubſtance there is a conſiderable waſte of nitric acid, all that is not employed in oxidating the metal being driven off and loſt during the evaporation to dryneſs and ſubſequent heating of the nitrate. In the proceſs here recommended, any given portion of quickſilver is to be diſſolved in a ſufficient quantity of the nitric acid, and the ſolution evaporated to dryneſs: with the ſalt thus obtained a further portion of quickſilver, equal, or nearly ſo, to the quantity at firſt employed, is to be triturated, with the addition of

water enough to form a paste, till the quicksilver entirely disappears. The moist mass is then to be gently dried, and exposed to a gradual heat in a retort. In a few minutes it assumes a red colour, and, when cooled, is obtained in the state of fine powder. *Ibid.*

New Process for preparing the Black Oxide of Iron (Æthiops Martialis.) By C. Cavezzali, *Apothecary to the Hospital at Loai.*

The black oxide of iron, or martial æthiops, is usually prepared by macerating for a length of time iron filings in distilled water, when the iron falls spontaneously into a black powder, which is afterwards separated by washing and exsiccation. This process, however, is tedious and imperfect, and much inferior, probably, to the method here recommended, which consists in using only water enough to form the filings into a paste, adding from time to time a fresh quantity to supply that lost by decomposition and evaporation. About the fifth day the mass swells, and gives out hydrogene gas. When this kind of fermentation has ceased, and which is usually about the 16th or 17th day, the mass is repeatedly washed, to procure the finer part of the oxide thus formed. The residue is then dried and pulverized, and again washed, when a fresh quantity of oxide is obtained, less fine than the preceding. Lastly, the remaining iron is again formed into a paste, and, after the same length of time, washed as before. In this way the whole of the iron becomes converted into black oxide, and gains an increase of weight equal to about 35 per cent. *Ibid.*

Insusceptibility of Electrical Impression.

Letter from Cit. *Clos* to *J. C. Delametherie*, editor of the *Journal de Physique.*

"Having heard it said, at *Sorèze*, that Madame N*** was not at all subject to electricity, my curiosity was excited by the

singularity of the fact: I wished to ascertain its certainty, and the following is what I have positively learnt.

"About 18 or 20 years ago, this lady, enjoying in other respects a robust constitution, was observed to be entirely insensible to the effects of the electric fluid: in the experiments which were made at the *Cabinet de Physique*, she submitted, without reluctance, to the most powerful shocks, and communicated them to other persons, without herself feeling them. At this period she had a sister nearly in the same situation. It is not known whether her other relations presented the same singularity. For some years past this lady has become valetudinary, and at times is attacked with nervous affections; at present she is subject to the influence of electricity, so, however, as to feel its effects but very slightly. She is as lively, spirited, and sensible, as the generality of other persons in whom the nervous system is very mobile.

"Is Madame N*** safe from a stroke of lightning? I should easily believe it, if the accidents which this terrible meteor occasions did not most frequently proceed from the *commotion* which its explosion impresses on the surrounding bodies, as well as from the disengagement of suffocating sulphureous vapours.

"However this may be, as my memory does not furnish me with any analogous fact in the books of physic which I have read, I communicate this to you. If you judge it of sufficient importance to merit further details, I will collect them, and with pleasure address them to you." *Ibid.*

Children poisoned by bitter Almonds.

In the Medical Journal, published at Montpelier, we find two cases of children poisoned by the use of bitter almonds; in one, the person had eaten them heated in a copper vessel; in the other, the child had been made to drink the milk of bitter almonds as a remedy against worms.

It is rather ſingular, the variety of opinions that exiſt on the pernicious effects of theſe bodies; ſome maintaining them to be harmleſs when uſed by man, while they are acknowledged to be highly deleterious to other animals, particularly birds. The learned Prof. Murray made many experiments on different animals, which prove their poiſonous qualities, but in different degrees in different animals. In thoſe animals, the ſubjects of his experiments, as well as in the caſes of the children, the effects of drunkenneſs were very remarkable. On the other hand, Fred. Hoffman aſſerts, Medic. Ration. Syſtem. vol. 1. that their bad effects are but little obſerved in the human ſubject, but, like nux vomica, highly ſo to other animals; he inſtances the dog, cat, pigeon, &c. The experiments of Schrader, a diſtinguiſhed chemiſt of Berlin, are remarkable. He found that the pruſſic acid was contained in laurel water, in the infuſion of peach leaves, in bitter almonds, as well as many other vegetables; and deſirous to aſcertain if this acid produced the ſame effects on the animal economy as the diſtilled laurel water, bitter almonds, &c. he gave a ſparrow ſome drops of it, which was immediately killed. The ſame author aſſerts, that birds reſpiring the vapours of pruſſic acid, die as quickly as thoſe expoſed to the ſmell of laurel water. If bitter almonds contain pruſſic acid, and if this acid be mortal, may we not conclude that their pernicious effects depend on the pruſſic acid which they contain?

Med. and Phys. Journal.

NEW PUBLICATIONS.

MEDICAL Inquiries and Observations. By Benjamin Rush, M. D. professor of the institutes and practice of medicine, and of clinical practice, in the University of Pennsylvania. In four volumes. The second edition, revised and enlarged by the author. Philadelphia, 1805. Conrad & Co. price 9 dollars.

The preface to the present edition, will best shew what changes have been made in it by the author.

IN the second edition of the following Medical Inquiries and Observations, the reader will perceive many additions, some omissions, and a few alterations.

A number of facts have been added to the Inquiry into the Effects of Ardent Spirits upon the Body and Mind, and to the Observations upon the Tetanus, Cynanche Trachealis, and Old Age, in the first volume; also to the Observations upon Dropsies, Pulmonary Consumption, and Hydrophobia, contained in the second volume.

The Lectures upon Animal Life, which were published, a few years ago, in a pamphlet, have received no other additions than a few notes.

The phenomena of fever have not only received a new title, but several new terms have been adopted in detailing them, chiefly to remove the mistake into which the use of Dr. Brown's terms had led some of the author's readers respecting his principles. A new order has likewise been given, and some new facts added, to the inquiry upon this subject.

In the Account of the Yellow Fever of 1793, many documents, interesting to the public at the time of their first publication, are omitted; and many of the facts and observations which related to the origin of the fevers of 1794 and 1797, now form a part of a separate inquiry upon that subject, in the fourth volume.

The hiſtories of the yellow fever as epidemics, and of its ſporadic caſes, have been publiſhed in the order in which they have appeared in Philadelphia, to ſhow the influence of the weather upon it, and the impropriety and danger of applying the ſame remedies for the ſame epidemic, in different and even ſucceſſive ſeaſons. The records of the firſt caſes of yellow fever, which have appeared in each of the twelve years that have been noticed, are intended further to ſhow the inefficacy of all the means, at preſent employed, to prevent its future recurrence.

In the fourth volume, the reader will find a retraction of the author's former opinion of the yellow fever's ſpreading by contagion. He begs forgiveneſs of the friends of ſcience and humanity, if the publication of that opinion has had any influence in increaſing the miſery and mortality attendant upon that diſeaſe. Indeed, ſuch is the pain he feels, in recollecting that he ever entertained or propagated it, that it will long, and perhaps always, deprive him of the pleaſure he might otherwiſe have derived from a review of his attempts to fulfil the public duties of his profeſſion.

Conſiderable additions are made to the facts and arguments in favour of the domeſtic origin of the yellow fever, and to the Defence of Blood-letting.

The Account of the Means of Preventing the Uſual Forms of Summer and Autumnal Diſeaſe, appears for the firſt time in this edition of the author's Inquiries. Part of the facts intended to prove the yellow fever not to be contagious, were publiſhed in the ſixth volume of the New-York Medical Repoſitory. The reader will perceive, among many additions to them, anſwers to all the arguments uſually employed to defend the contrary opinion.

The Inquiry into the Comparative State of Medicine, in Philadelphia, between the years 1760 and 1766, and 1805, was delivered, in the form of an oration, before the Medical Society of Philadelphia, on the 18th of February, 1804. Some things

have been omitted, and a few added, in the form in which it is now offered to the public.

If this edition of Medical Inquiries and Observations should be less imperfect than the former, the reader is requested to ascribe it to the author having profited by the objections he encouraged his pupils to make to his principles, in their inaugural dissertations, and in conversation; and to the many useful facts which have been communicated to him by his medical brethren, whose names have been mentioned in the course of the work.

For the departure, in the modes of practice adopted or recommended in these Inqairies, from those which time and experience have sanctioned, in European and in East and West-Indian countries, the author makes the same defence of himself, that Dr. Baglivi made, near a century ago, of his modes of practice in Rome. "*Vivo et scribo in aere Romano,*" said that illustrious physician. The author has lived and written in the climate of Pennsylvania, and in the city of Philadelphia.

A Treatise on the hidden nature, and the treatment of Intermitting and Remitting Fevers: illustrated by various experiments and observations; in two books, by Jean Senac, M. D. Translated from the Latin, with notes, by Charles Caldwell, M. D. Philadelphia, 1805. *Kimber, Conrad, & Co. pp.* 299, *price* 1 *dol.* 75 *cts.*

Recommendatory Preface by Dr. Rush.

THE following translation of Senac's treatise, "De recondita febrium intermittentium, tum remittentium natura, et de earum curatione," was undertaken by Dr. Caldwell, at the request of the subscriber. He has long known it to be a judicious and useful work, and has derived much assistance from it in his practice. He is happy in this opportunity of recommending it

to the students of medicine in the United States, as peculiarly calculated to assist them in forming just opinions, of the nature and treatment of the summer and autumnal diseases of our country.

BENJ. RUSH, M. D. &c. &c.

June 29, 1805.

Practical Observations in Surgery, illustrated with cases and plates, by William Hey, Esq. F. R. S. Member of the Royal College of Surgeons in London, &c. &c. Humphreys, Philadelphia, 1805, *pp.* 332, *price* 3 *dol.* 25 *cts. boards. First American Edition.*

The Lectures of Boyer, upon Diseases of the Bones, arranged into a Systematic Treatise, by A. Richerand, Professor of Anatomy, &c. &c. at Paris. Illustrated with plates. Translated from the French, by M. Farrell, M. D.— First American edition, with notes and additional plates by Joseph Hartshorne, M. D. Philadelphia, 1805, *Humphreys, pp.* 368. *price* 4 *dol.* 12½ *cts. boards.*

A Compendious System of Anatomy, in six parts: I. Osteology. II. Of the Muscles, &c. III. Of the Abdomen. IV. Of the Thorax. V. Of the Brain and Nerves. VI. Of the Senses. From the Encyclopædia, illustrated with twelve large Copperplates, pp. 419, *price* 2 *dols. Dobson. New edition.*

A System of Surgery, extracted from the works of Benjamin Bell, of Edinburgh; by Nicholas B. Waters, M. D. Fellow of the College of Physicians of Philadelphia, and one of the Surgeons of the Philadelphia Dispensary; illustrated with Notes and Copperplates, third edition, pp. 607. *price* 3 *dols. Dobson.*

The Philadelphia Medical and Physical Journal, collected and arranged by Benjamin Smith Barton, M. D. Professor of Materia Medica, Natural History and Botany, in the University of Pennsylvania. Part 1. *vol.* 2. *Philadelphia*, 1805. *Conrad & Co.* 8*vo. pp* 208. 1 *dollar.*

A medical institution has been lately established in Philadelphia, under the title of the "PHILADELPHIA MEDICAL LYCÆUM."

At a meeting of the Philadelphia MEDICAL LYCÆUM, on the 1st of January 1806, the following gentlemen were chosen officers for the ensuing year.

Dr. Coxe, Dr. Dewees, Dr. Chapman, Dr. Dorsey,	Presidents.
Dr. E. Griffith,	Treasurer.
Dr. Rousseau,	Librarian.
Dr. Meredith,	Curator.
Dr. Farquhar,	Corresponding Secretary.
Mr. S. S. Tucker,	Recording Secretary.

The following gentlemen were elected junior members of the LYCÆUM.

Mr. Tucker,	Mr. Jones,
Mr. Weems,	Mr. Nelson,
Mr. Wroth,	Mr. Little,
Mr. Clagget, jun.	Mr. Doyley.

MEDICAL MUSEUM.

Vol. II.....No. IV.

Account of the Measles in Jamaica. By J. Quier, *in a Letter to Dr.* Donald Monro.*

Jamaica, *June* 28, 1774.

Dear Sir,

I HOPE you will not be diſpleaſed with my tranſmitting to you the following account of a diſeaſe, that has ſometimes occaſioned great mortality in this iſland, and been almoſt equally dreaded with the ſmall pox; as its manner of appearance in the epidemic I deſcribe, (as far as I have been able to diſcover) was the ſame it has *always obſerved in this country; and differed much from what is generally ſeen in Europe.*

The meaſles firſt made their appearance within the verge of my practice, in December 1770. In January, of the ſucceeding year, they ſpread apace; and, during the three following months, were ſo epidemical, that I had ſeldom leſs than one hundred and fifty negroes ill of that diſeaſe at a time.

* This letter of Mr. Quier to Dr. Monro, referred to in the paper in the preceding number, is ſo little known, though in print, that the Editor will be excuſed for inſerting it.

In this epidemic, the *fever* differed greatly in different people, in the manner of its *firſt attack*. In *ſome*, it began at once with conſiderable violence, and was accompanied, within a day or two, by the eruption; in *others*, it was of a ſlow remittent or intermittent kind, with quotidian paroxyſms, and preceded the eruption for five or ſix days. The uſual ſymptoms, (of cough, inflamed eyes and throat, anxiety and reſtleſſneſs,) were obſerved here in a very great degree. But the *moſt certain* diagnoſtic of the diſeaſe in its beginning, (and which I do not remember to have found mentioned by any author that I have met with,) was, the appearance of the *white aphthous ſpecks about the gums*; which were always viſible ſeveral days before the eruption, and not unfrequently before the fever began. By this ſymptom, I diſcovered ſeveral to be affected with the meaſles, before they were themſelves ſenſible of any indiſpoſition. As the fever increaſed, and the eruption approached, theſe ſpecks ſpread themſelves, (together with an eryſipelatous inflammation) over the whole ſurface of the mouth and fauces, as far down as could be ſeen into the pharynx. The *cough* was ſhort, dry, and tickling, haraſſing the patient inceſſantly; but without any conſiderable difficulty of breathing, or ſenſe of oppreſſion at the breaſt, in the intermiſſions of coughing; and ſeemed to proceed from the ſame eryſipelatous inflammation being continued along the larynx, trachea, and its branches, quite into the air-veſicles of the lungs. The *pimples* of the eruption did not appear ſo much in cluſters as is uſually the caſe in Europe; but were more ſolitary and diſtinct, larger, more elevated every where above the ſurface of the body, and attended with more intenſe heat and inflammation of the ſkin. As the exanthemata ſpread farther and grew more numerous, the fever and cough increaſed; and the inflammation of the ſkin, eyes, mouth, and throat became more intenſe; and ſeemed to be frequently continued quite through the gullet, ſtomach, and inteſtines;—the patient being now commonly attacked with moſt enormous *gripes and purging*, ſometimes of blood and mucus; and often likewiſe with inceſſant *vomiting*.

About four days from the firſt eruption, the exanthemata generally diſappeared; and at the ſame time, *if the patient had proper medical aſſiſtance*, the fever likewiſe. But when this was not the caſe, and bleeding had been ſparingly uſed or entirely omitted (where copious bleeding had been requiſite;) I have ſeen inſtances in which the fever *increaſed at this time;* the inflammation of the fauces changed from an eryſipelatous to a phlegmonic nature; the cough grew more violent; the patient vomited inceſſantly; and was ſeized with a dyſentery, attended with acute and conſtant pain of the belly: and died ſoon after; either from the inflammation of the ſtomach and inteſtines, or from a gangrene ſupervening.

But however judiciouſly the diſeaſe might have been treated, the fever and eruption were *generally ſucceeded*, ſooner or later, by a *flux;* in which was voided, (ſometimes with and ſometimes without liquid fæces,) a great deal of mucus; moſt commonly joined, but not intimately mixed, with blood. The ſtools were preceded by ſharp gripings; and were ſometimes ſo frequent, as to bring the patient into the moſt imminent danger, and in one caſe carried him off very ſuddenly. Beſides the gripes which preceded the ſtools, the whole abdomen was affected with conſtant pain and ſoreneſs; the dejection of mind and proſtration of ſtrength were great; the ſtomach frequently rejected every kind of food; and naufea and vomiting were ſometimes very urgent, and if removed, returned again after a ſhort time. The teneſmus occaſioned very commonly, in children, a troubleſome protruſion of the rectum through the anus; and, in pregnant women, brought on a diſcharge of blood from the uterus, and ſometimes abortion. The rectum was ſometimes moſt evidently ulcerated. In a boy about ſix years old, (who *had not* been ſufficiently blooded in the febrile ſtage of the diſeaſe,) the anus was ulcerated; the *true* aphthæ, which appeared during the flux, became corroding ulcers, and ſpread over the whole mouth, fauces, and lips; a pimple on the margin of the upper palpebra of the right eye, and a number of faruncles

which broke out on different parts of the body, (eſpecially where bliſters had been applied,) were converted into large ulcers, and mortified before his death.

Thoſe who were *not* attacked with the flux, had boils in different parts of the body; and very commonly an itchy eruption over the whole ſkin. The boils and itchy eruption likewiſe generally *ſucceeded* the flux; and whenever they appeared, were ſalutary ſymptoms. In one caſe, where the flux did not ſucceed the fever, the matter which uſed to be diſcharged that way, was evidently tranſlated to the brain; and occaſioned much danger to the patient.* During the flux, a febrile paroxyſm of ſeveral hours or a whole day, happened to ſome; and others had an intermittent fever of more or leſs continuance.

* Plato, a ſtout negro, about 30 years old, had no purging after the receſſion of the meaſles. May 16, 1771. He complained yeſterday of ſlight tremors, and rejected food; had no ſleep laſt night; took this morning, ſal cathart. amar. ſeven drachms, with *ol. olivar.* half an ounce, which gave him two ſtools only: this was the firſt purge after the meaſles. This evening I was ſent for. The ſymptoms were, frequent convulſive tremors; great reſtleſſneſs and perpetual jactation of his body; he talked nonſenſe, and collected ſtraws from the floor; but when ſpoken to, would recollect himſelf, and anſwer with tolerable coherence; a perpetual ſhort dry cough; reſpiration ſhort, interrupted and laborious; apparently great anxiety; perpetual ſputation; eyes conſtantly in motion, with a very wild look; pulſe low, weak, and remarkably ſlow, but regular; ſkin cold. When aſked where his complaint lay, he ſaid he felt pain in his left ſide and breaſt; if deſired to ſhew where with his hand, he applied it to the region of his heart. This day, eat nothing. ℞ camphor. gr. v. aſafœtid. gr. ij. teſt. oſtreor. pp. q. s. ut ft. pulvis, ſumend. ſexta quaque hora, cum ſpt. C. C. guttis xxx, ex infuſ. *folior. ſalviæ.* A bliſter was applied between the ſhoulders. For food, weak broth was given often in ſmall quantities. 17th. He ſlept a little laſt night, but complained of pain in his head. The ſame ſymptoms as yeſterday, with this difference; that he was now more ſenſible, and anſwered when ſpoken to, with more coherence. No ſtool ſince yeſterday before noon. Bliſters were applied to the head and thighs, and a clyſter injected in the evening: the medicine continued as before. 20th. All the nervous and ſpaſmodic ſymptoms removed: (He grew better on the 18th.) The medicine ordered to be taken now only three times a day. As he complained much of the ſoreneſs occaſioned by the bliſters, and want of ſleep at night; fifteen drops of tinct. thebaic. were directed to be given at night, as long as requiſite. 23d. No other complaint but of weakneſs.

An *inflammatory diatheſis* of the conſtitution remained, in moſt who had had the diſeaſe ſeverely, for ſeveral months afterwards. Some few inſtances occurred of a diſpoſition to a *dropſy*, where the body was extremely reduced by the flux.

Thoſe on whom the epidemic exerted its greateſt fury, were the moſt hale, ſtrong, and valuable ſlaves. The worthleſs and lazy, and ſuch as were emaciated through want of food, eating dirt, or ſevere uſage, had ſcarce any indiſpoſition.

The ſymptoms which I have related naturally diſtinguiſhed the diſeaſe into two periods: the *Febrile* and the *Dyſenteric*; the curative indications of which being very different, I will now ſeparately deſcribe the *method of treatment* which I found to ſucceed beſt in each.

1ſt. In the *Febrile* ſtate of the diſeaſe, *no one died*; notwithſtanding many were in the greateſt danger. The ſafety however of the patient in the dyſenteric and moſt dangerous period, *depended* chiefly on the method of cure made uſe of in the former. As I conſtantly obſerved that the moſt robuſt people, and thoſe in whom the fever and inflammatory ſymptoms roſe higheſt, were always attacked with the ſevereſt fluxes; I endeavoured to *prevent the generation of morbid matter* to be diſcharged by the inteſtines in the ſecond ſtage, by repreſſing the fever and inflammation by means of a cooling regimen, and as large and frequent veneſections as the patient's conſtitution would bear. *As ſoon therefore as any one complained*, (unleſs the ſtate of his body abſolutely forbid it,) more or leſs blood was taken away, according to the age, conſtitution, and other circumſtances of the patient. If the mouth only was yet inflamed, and the fauces not at all or but ſlightly, a moderate doſe of ſal cathart. amar. was given, either on the ſame day, or next morning:—but if it appeared by the ſtate of the throat, that probably the inflammation extended to the *ſtomach* or farther,

this was omitted; (as I found that the mildeſt purgative could not be borne under that circumſtance in this ſtage of the diſeaſe, without danger of an hypercatharſis:) an emollient clyſter was however commonly thrown up with advantage. The patient was not ſuffered to confine himſelf; but was ordered to keep conſtantly, by day, in the *open air in the ſhade.* Warm decoctions of emollient and pectoral herbs were uſed for common drink. If the ſtomach could bear it, ſmall portions of nitre were given. *Oily tinctures* or *ſpermaceti* emulſions were uſed plentifully, to mitigate the *cough;* and moderate doſes of tinct. thebaic. were uſually given at night. The *mouth and throat* were gargled with ſome warm emollient decoction, ſweetened with muſcovado ſugar;—and the *eyes* were cooled by the frequent application of a weak ſolution of white vitriol and ſaccharum ſaturni.

As the fever and inflammatory ſymptoms increaſed, the bleeding was *repeated;* and very frequently a ſecond time, about the ſtate of the fever, juſt before the deſquamation of the exanthemata began. But the moſt alarming of all the ſymptoms (and which *demanded bleeding moſt,*) were the *vomiting and purging,* which ſometimes happened in this period. As this was chiefly a *ſpaſmodic* affection of the ſtomach and inteſtines in conſequence of the inflammation, and attended with excruciating pain; after bleeding, recourſe was had to opium, and that in conſiderable quantities: (two, three, or even four grains of opium were requiſite to be given to adults in the courſe of every twenty-four hours.) Beſides this, ſpermaceti, pulvis e tragacanth. comp. gum arabic, (or the gum of the acajou tree,) ſtarch-jelly, and ſtarch clyſters with tinct. thebaic. and ſometimes teſtaceous powders, chalk, or Armenian bole, finely pulverized, were abſolutely neceſſary to be freely uſed; and by theſe means, it was generally pleaſing to ſee with how much *certainty and eaſe* theſe ſymptoms were removed. At firſt, I gave in this caſe, a ſmall quantity of manna and ſal cathart. amar. with a

little ſweet oil, and a ſtronger opiate at night after it than uſual; but the evacuation which enſued, was commonly ſo violent and ſunk the patient ſo low, that I found I was miſtaken in my idea of the indication; and ſoon deſiſted altogether from the uſe of a purgative.

In this ſtage, I chiefly relied on veneſection, for relieving the *cough*. In ſome few caſes that were more than uſually importunate, I applied bliſters to the thighs:* but the uſe of theſe was commonly reſerved for the dyſenteric period.

2d. When the diſeaſe was treated in this manner, after the exanthemata had continued out on the ſkin about four days, (as I have already ſaid,) they gradually diſappeared; leaving the ſurface of the body covered with furfuraceous ſcales:—the fever and inflammation of the eyes, mouth, and throat, ceaſed about the ſame time: the cough generally continued longer. And now, either immediately, or ſometimes not till ſeveral days afterwards, the *Dyſenteric period commenced.* Not unfrequently the purging, which had begun in the febrile, was continued into, and formed the dyſenteric ſtage.

Immediately upon the complete receſſion of the exanthemata, and the appearance of the bran-like ſcales, if the inflammation of the mouth and fauces was quite gone, it was found expedient, (whether the patient had or had not yet a flux,) to give a gentle doſe of manna and ſal cathart. amar. with the addition of ſome ſweet oil:—but if the internal inflammation ſtill ſubſiſted, I thought it proper to defer the purgative for a day or two longer.

Bleeding, if it had been duly adminiſtered in the former period, was not only unneceſſary now, but hurtful, (as it evidently could not much leſſen the quantity of matter to be car-

* Some Weſt India practitioners have not only applied bliſters to the inner part of the thighs for coughing, but for vomiting.

ried off by the alvine excretion; but would reduce the patient's ſtrength, already ſcarcely ſufficient to bear ſo profuſe a diſcharge.) Bleeding was without doubt indiſpenſably requiſite in thoſe caſes, in which I mentioned my having ſeen the fever and internal inflammation *increaſe* after the diſappearance of the eruption, *through want of it* in the former part of the diſeaſe; but I had it not in my power to determine from my own experience, whether, in caſes where the morbid matter is turned into the ſtomach and bowels, (while the inflammation with which they were affected in the febrile period ſubſiſts,) it be moſt expedient to adminiſter *purgatives immediately;* or to endeavour *firſt* to remove, or at leaſt to abate, the inflammation by repeated bleeding, opiates, and demulcents; though I am inclined to believe the latter. The caſes of this kind which occurred, were but few: they ſoon proved fatal, but did not happen in my own practice.

At night, after the operation of the cathartic, an opiate was always given. But although the purge generally *mitigated* the ſeverity of the flux, if already begun; or rendered that ſubſequent to it more mild than it would otherwiſe have been; *yet* it was never able to carry off the former, nor often to prevent the latter: often indeed, the ſtools continued from this time to increaſe in number, notwithſtanding the opiate given at night; and the Dyſentery began from thence.

If the *cough* remained after the purge had been adminiſtered, (as was moſt frequently the caſe;) bliſters, applied to the thighs very ſeldom failed to remove that ſymptom entirely.

Let us ſuppoſe the *Dyſentery to be now begun*, with ſevere gripes, and blood and mucus in the ſtools; and the patient to have taken one doſe of the oily purge. Here it was proper to have recourſe to the *ſame* method which I propoſed in the *flux of the febrile period*. The ſame mucilaginous, demulcent, and abſorbent medicines were neceſſary *to defend the ſtomach and guts*

from the acrimony of the morbid matter: and *opiates* were requiſite, not only to prevent the evacuation from exhauſting too much the ſtrength, and throwing the patient into a deliquium; but likewiſe, to quiet the painful ſpaſms, to moderate the inflammatory diſpoſition, and to impede the acceſſion of its more direful effects. Nor was any danger to be apprehended from the acrid matter being pent up within the body, by the uſe of opiates; as two, three, or four grains of opium taken by an adult, in the ſpace of twenty-four hours, were in general, at this time of the diſeaſe, but barely able to reſtrain the flux within ſuch bounds, as not to exhauſt the patient.*

The manner in which the blood appeared in the ſtools, together with the teneſmus, indicating a violent irritation of the rectum by the *ſharp humours* which flowed through it; I ordered a ſtarch clyſter, with the addition of ſome tinct. thebaica, to be injected daily twice; which not only gave eaſe, and prevented the ulceration of that gut; but greatly diminiſhed, and in time entirely ſtopped, the excretion of mucus. From this circumſtance, it likewiſe appeared, that the ſource of the mucus was commonly no higher than the great inteſtines; and moſt frequently perhaps in the rectum, and inferior part of the colon; in which opinion I was confirmed, by obſerving, that towards the decline of the flux, ſome perſons had three or four ſtercoraceous ſtools in a day, of a tolerable conſiſtence; but between them, a frequent excretion of mucus, without the leaſt admixture of fæces.

If the patient had *no* flux, a repetition of the purgative, about four days after the firſt doſe, commonly finiſhed his cure; but if he *had* the flux, it was ſtill more neceſſary; and after it, the

* This free uſe of opium, at this time, may appear reprehenſible; but the frequent fainting fits, and ſometimes even ſudden death (one inſtance of which occurred in my own practice, and I have known of others) which happened from the prodigious diſcharge by ſtool, were no otherwiſe to be prevented; and the ſucceſs juſtified the uſe of the medicine.

ſame medicines were to be uſed as before; with a further repetition of the oily purge, if feveriſhneſs, ſlight nauſea, tenſion of the belly, or return or increaſe of the griping pains, required it.

As ſoon as by the uſe of the oily purges, opiates, and demulcent medicines, the painfulneſs of the abdomen and gripes were either wholly or nearly gone; and the ſtools (however liquid,) became ſtercoraceous; it was then time to endeavour to divert the humours from flowing inwards, by increaſing the diſcharge by the cutaneous emunctory; to reſtrain the rapidity with which the periſtaltic motion precipitated the contents of the inteſtines towards the anus, by obliterating the impreſſion of the morbid ſtimuli, by means of paregorics, and introducing others of a different nature; and to reſtore the tone of the bowels by medicines of the warm and bracing kind. Theſe ſeveral indications I found to be very ſucceſsfully anſwered, by continuing the uſe of the opium as before; by giving half a drachm of theriac. androm. or mithridate, two grains of rhubarb, and from five to ten grains of toaſted nutmeg, or a drop or two of its eſſential oil, or one of that of cinnamon, three or four times a day; and directing a decoction of logwood, or of the bark of the guava tree, with ſome warm aromatic, to be uſed for common drink. If the quantity of rhubarb, in the medicine juſt deſcribed, after being taken for a few days, ſeemed to purge the patient; it was beſt to omit it for two days; and then add it again for about three days, alternately.

About the decline of the flux it generally happened, after the ſtools had decreaſed in number, and grown of a better conſiſtence for ſome time, that the *belly became tenſe and painful;* and ſhortly after, a pretty ſevere purging ſucceeded for two or three days; when the frequency of the ſtools gradually diminiſhed, and at length the belly became again tenſe and painful. This painful tenſion of the belly and purging continued to return alternately, for ſome time; and now and then proved very troubleſome. As ſoon, and as often as this tenſion and painfulneſs

appeared, it was found expedient to give a ſmall doſe of manna; or, what I thought better, of rhubarb, (which could not be uſed in the earlier part of the flux, without occaſioning moſt ſevere gripes, and increaſing the diſcharge of blood.) After the operation of the rhubarb, or manna, (as often as it was requiſite to have recourſe to them,) the uſe of the medicines juſt now recommended, was to be reſumed; and in this manner to be continued, until the inteſtines and their functions were reſtored to their natural ſtate.* By theſe means moſt of the ſick eſcaped; ſome recovering very ſoon, and without any difficulty; others only by degrees, after the flux had run on for ſeveral weeks. Not a little care was requiſite to *prevent a relapſe*; which happened very eaſily from irregularities, or catching cold. I have likewiſe known a flux come on from getting wet in a ſhower of rain, near a month after the diſappearance of the meaſles; when only a very trifling purging had ſucceeded the receſſion of the exanthemata.

Not unfrequently it happened pretty early, in this ſecond period of the diſeaſe, if there was but little or no purging; or, if the flux was more profuſe, towards its decline or after its total ceſſation; that many were affected with *loſs of appetite, naufea, and ſometimes puking.* In this caſe a vomit, and after it a doſe of rhubarb, were given; which always removed theſe ſymptoms for the preſent; but as they were very apt to return, it was generally neceſſary to repeat theſe evacuations after a ſhort interval of time.

As after thoſe violent affections of the ſtomach and bowels, theſe viſcera frequently contracted a great debility, (which produced loſs of appetite, indigeſtion, and flatulency;) the uſe of bitter and aromatic infuſions was found of great advantage.

* The rhubarb was always left out of the medicine for a day or two after the purge had been taken. Some people were now and then affected in the manner I have juſt mentioned, after they had altogether ceaſed to take medicines.

When the violence of the gripes and teneſmus brought on a diſcharge of blood from the *uterus, in pregnant women;* after bleeding, (if the patient appeared capable of bearing that evacuation,) it was of ſervice to remove, as much as poſſible, the irritating cauſe, by a gentle doſe of manna and ſweet oil; to calm the ſpaſms with large and frequent doſes of opium; and to defend the rectum from the ſharp humours, and render it leſs ſenſible of their acrimony by *ſtarch clyſters* with tinct. thebaic. But notwithſtanding all my endeavours, abortion ſometimes happened: this likewiſe ſometimes came on ſuddenly, and without any previous hæmorrhage. If after the dyſentery had ceaſed, a draining of blood from the pudenda continued obſtinate; or, after having once or oftener ſtopped, returned without abortion; (and opiates, Peruvian bark, and elixir of vitriol had failed;) I have ſometimes given with ſucceſs, three or four times a day, a ſpoonful or two of a watery tincture, made with half a drachm of calcined vitriol, and a handful of ſome aſtringent bark infuſed in a quart of cold water. This medicine I have likewiſe uſed with great advantage in other uterine floodings.*

* *Since that time,* I have uſed the following medicine; which I think more efficacious; indeed the moſt to be depended on of any that I know in hæmorrhages, *in which aſtringents are proper.* ℞. Cort. Peruv. pulv. ℥i. Aquæ lb. iv. Coque ad partem dimidiam: tum adjice vitrioli calcinat. ʒſs. et ab igne igne auferatur decoctum; cumque penitus refrixerit, coletur. A ſpoonful of this medicine, added to four ſpoonfuls of a decoction of bark, or diluted with as much cold water, I have uſually given three or four times a day;—and to prevent its being decompoſed in the ſtomach and inteſtines, have ſometimes added a few drops of elixir vitrioli acidi to each doſe. A lady of a very lax habit of body, who had been married about twenty months, had miſcarried twice within that time. About a fortnight after her laſt miſcarriage, which happened when ſhe was from home, on a viſit; ſhe rode about ſixteen miles to her own houſe. On the next day, ſhe was ſeized with a violent pain and tenſion of the hypogaſtrium, and excruciating pains of her bowels. By the help of emollient clyſters and fomentations, and gentle diaphoretic and anodyne medicines, ſome fetid grumes of blood came away from the uterus; and a moderate diſcharge ſucceeding, ſhe was within a few days, to all appearances perfectly well. About five weeks afterwards, ſhe informed me, that the diſcharge had never entirely ceaſed after her late illneſs; and was now ſo much increaſed, that ſhe was reduced, by the hæmor-

During the dyſenteric (contrary to what I had done in the preceding) period, I directed the *body to be kept warm*, eſpecially at night; with a view of promoting the diſcharge of the vitiated humours by perſpiration; and of preventing their being turned in ſo impetuouſly upon the inteſtines. The food, both in this and the febrile ſtage, was of the ſlighteſt and blandeſt kind that could be afforded; ſuch as flour-pap, boiled rice, and freſh-meat broths.

It may perhaps be a circumſtance worth noticing relative to this flux, that, when a *great number were ſick together*, (it not being unuſual for fifty or ſixty negroes belonging to the ſame eſtate, to have the diſeaſe at the ſame time,) it was always ſevereſt; and I have often obſerved the nurſes, and even myſelf to be affected, in ſome degree, with the ſame diſorder. As I attributed this to the effluvia of their excrements, I ordered holes to be digged every morning for the ſick to eaſe themſelves into; and to be cloſed again next day; but ſuch was their perverſeneſs, that they could not be prevailed on to make uſe of this convenience.

The appearance of a ſingle febrile paroxyſm, without any other remarkable ſymptom, in the ſecond ſtage of the diſeaſe, required no particular regard; but if the attacks were repeated,

rhage to a ſtate of great debility. As the diſeaſe ſeemed to proceed from weakneſs and laxity, I adviſed her to uſe the decoction of bark, with elixir of vitriol. The bark, when ſhe began to take it, having a tendency to run off by ſtool, I ſubſtituted a few drops of tinct. thebaic. in the place of the elixir of vitriol; the conſequence of which was a great increaſe of the hæmorrhage. Other methods being taken to prevent a diarrhœa, the decoction of bark and elixir of vitriol were continued for ſeveral days; without the leaſt benefit. I *then* had recourſe to the medicine before deſcribed; which being added to the decoction of bark, in the manner already mentioned, almoſt immediately produced a conſiderable alteration; and ſoon entirely ſtopped the hæmmorrhage. Its uſe was, however, ſtill continued for ſome time afterwards, with the addition of a few drops of elixir vitrioli acidi, to each doſe; and reſtored the patient to a ſtate of good health ſhe had not often experienced before.

(as was not unfrequently the caſe, though I never obſerved it either in the beginning of the flux or while it was very ſevere,) it was neceſſary to have recourſe to the bark.

If the diſeaſe was treated in the manner I have related, notwithſtanding the violence of many of its ſymptoms, it was far from being fatal; the number of thoſe that died, according to the beſt calculation I could make, not amounting to more than *one out of eighty*.

I have already obſerved, that moſt people were particularly ſubject to *inflammatory complaints after the meaſles*:—The *other* morbid affections which occurred in conſequence of them, were not many. The moſt remarkable were,

I. A *tetanus and locked jaw*, in a girl about eleven years old, from catching cold in a rainy day. She perfectly recovered in the ſpace of a month, by means of opiates: the greateſt quantity ſhe took, was twenty drops of tinct. thebaic. every two hours.

II. A woman about forty, and a boy about ſeventeen years old, after ſevere fluxes, grew *anaſarcous*; the boy had been affected with the ſame diſorder more than once before. The woman died about three months after the meaſles; but the boy recovered, notwithſtanding the ſcarifications of his ſcrotum had mortified, and thoſe on his legs had been kept with difficulty from being affected in the ſame manner. They both took the cort. Peruv. and chalybeate preparations; and were ſupported with the moſt generous food that could be afforded them.

III. A ſucking child, of the age of eighteen months, had a ſlight *dry cough* after the meaſles; to this acceded a *periodical fever*, with quotidian paroxyſms. All my endeavours could not perfectly remove the cough; which if at any time a little better, ſhortly reſumed its former violence. The fever likewiſe, although it ſometimes ceaſed for a week, or at other times longer, yet conſtantly returned again. The lungs were evidently much obſtructed, but did *not ſeem to be ſuppurated*; the fever was alſo

more inflammatory, and had severer paroxysms, than is usual in the purulent kind. The child lingered in this manner for about six months, and then died *tabid*. I have observed the same kind of fever and cough at other times, from obstructed and inflamed lungs in this country.*

To these remarks it may not be improper to add, that during the course of the epidemic, the weather was *extremely dry and fair*; but about the end of April, some rain fell, and in the beginning of May the *wet season set in*; which so entirely put a stop to the disease, that I saw only one boy seized with it after the rains began.

I am, &c.

J. QUIER.

DR. DONALD MONRO.

* In this country, where hardly any fevers occur, but of the intermittent kind; and those with every variety of type, and irregularity of paroxysm, and accompanied frequently with diverse adventitious symptoms, and, amongst others, with affections of the lungs; it is perhaps impossible to discover immediately this hectic fever; which will therefore, most probably be treated at first, whenever it happens, as one of the *intermittent* kind, with a cough. With respect to the necessity of bleeding, no one can be mistaken; but the bark will be too readily given; which always increases the cough and difficulty of breathing, and frequently changes the intermittent into a continual fever. The blood in this disease, (in whatever quantities and however often it be drawn,) has, to the very last, *more* of the tenacious inflammatory size than, I think, I have seen at any other time. As far as I have observed, relief is only to be expected from *frequent bleedings, the antiphlogistic neutral salts, dilution, and a low diet*: the bark is certainly noxious. Herein this disorder differs from most inflammatory pleurisies and peripneumonies in this country; which, if *venesection be very liberally used at the same time*, bear the bark well. Indeed the free and early use of this medicine is as necessary in the diseases here, as in the veternous fevers in Italy, and some other southern countries of Europe; for, (as the fever, which attends these local inflammations, is always, unless by accident, of the intermittent kind) if the greatest remission of the symptoms, that can be wished for, be obtained at the end of a paroxysm; the next return of the fever will almost always, if the case be in the least degree severe, bring every thing back into the same, and frequently a much worse state than before. Next to the lancet, therefore, the saving life depends on making the patient swallow, in the intermission, as much bark as his stomach can bear; that, if possible, a return of the fever may be prevented, or at least the severity of the next greatly mitigated.

An Account of the Diſſection of a young Man, who died Dropſical, which is referred to in the Letter to Dr. RUSH.*

A. B. aged about twenty-two years, having occaſionally felt indiſpoſed, and moſt commonly indolent for the laſt two or three years of his life, was attacked in a diſtant part of the ſtate, in the fall of 1804, with two acute diſeaſes in ſucceſſion.† After his apparent recovery, he returned home, lived full, and took little exerciſe; and partial ſwellings, though (as is believed) without permanence, manifeſted themſelves from time to time in different parts of his body. In January, he applied for advice on account of a confirmed aſcites and anaſarca, his evacuation by urine being at this time very ſmall. His death took place April 11, 1805; notwithſtanding a conſiderable variety of the regular methods of cure had been employed, and in ſome reſpects, with apparent ſucceſs.

His body being opened, exhibited the following appearances.

The tumor by different means had wholly quitted his thighs, legs and face; and was much reduced in the abdomen: where however, there were ſtill ten or eleven pints of ſerous fluid, of a light brown colour, joined by about one pint of pus.

The omentum, meſentery, and meſocolon were ragged and thickened; and contained many knots.

The liver had ſuffered eroſion to the depth of about one-eighth of an inch, over a very great extent of its ſurface; ſome ſmall portions of it ſeemed wanting, as if ſliced off by different cuts of a knife; one ſmall portion of the ſubſtance ſeemed full of punctures, accompanied with cracks, as if it had been the

* See the letter—p. 341, of this Volume.

† Said to be fever and dyſentery; but the order of their attack is not known.

ſubject of a peculiar kind of rot, to the depth of an inch; various parts of the edges of the liver were ſchirrous; but there was no abſceſs. The colour within was tawny and brown, as if the liver had been kept for a time in hot water. Where it had the extenſive eroſion above mentioned, it was thickly coated with yellow matter, reſembling the healthy pus of a healing wound.

The rectum within was inflamed, perhaps owing to the effect of medicines.

The *outer* coats of the inteſtines, as alſo of the kindneys, and in general of all the viſcera, ſeemed ſallow and ſodden; as if affected by the fluid in which they had been ſteeped.

The penis and ſcrotum had loſt the fluid, which had ſwelled them for a ſhort time during the diſeaſe; but the end of the penis ſeemed of a blackiſh red colour, as if diſpoſed to mortify; a tendency which had before manifeſted itſelf with ſome of the ſcarifications in the feet.

The urinary bladder and the gall bladder, the kidneys, the ſpleen, and the pancreas, exhibited nothing within which excited attention; excepting that ſeveral of them wanted the colour belonging to health.

The heart contained three polypi, was very flabby, and had a remarkable enlargement of part of its vaſcular ſyſtem; which are among the ſymptoms noticed by Cheſelden, in various caſes of dropſy.

There was little blood ſeen in the body.

Some ſmall tubercles were found on the ſurface of a part of the lungs; and the poſterior parts of both lobes were full of dark coloured blood. The patient had ſuffered a ſevere attack

of cough about a fortnight before his death, in conſequence (as he ſuppoſed) of cold taken while riding; but the cough had greatly abated; and the colour of the blood was ſuch as Dr. Baillie deſcribes, when the blood occaſionally *gravitates* to thoſe parts in the recumbent poſture of a dying perſon.

The matter ſeen in this body differed from the yellow *floating* fibrous matter, ſometimes accompanying effuſion and inflammation; (as for example, in the bodies of ſome females who die of fevers which are the occaſional reſult of childbirth.) It was ſoft and pulpy; and kept at the bottom of the fluid. The matter alſo upon the liver, had the appearance of common healthy pus. The teſt however of the ſolution of ſal ammoniac, mentioned by John Hunter, in his chapter on pus, was not applied; nor were any of the other teſts which have been noticed, on this occaſion.

One remarkable point in this diſſection was the apparent affection of the liver and other parts, owing to certain qualities in the fluid which ſurrounded them. The operation of an *external* cauſe upon the liver ſeems evident from the following proofs: Firſt, from ſo little loſs of ſubſtance having occurred *internally*; ſecondly, from the loſs outwardly being ſo equable and ſuperficial, throughout the whole of a very large extent; and laſtly from the healing proceſs having begun, when the fluid in the abdomen leſſened, and left the liver dry; (the patient favouring the retreat of the fluid from this quarter, by his poſture both in bed, and out of it.) As the diſeaſe had repeatedly fluctuated, it is probable, that a like courſe of proceeding had firſt corroded the parts of the liver which ſeemed to have been cut off by a knife (as mentioned above,) and then given room for a healing proceſs to follow upon it.

What has juſt been ſaid of the action of the foreign fluid upon the liver, which is confirmed by the ſallow and ſodden complexion of the integuments, and the ragged and diſeaſed ap-

pearance of ſome of the membranous expanſions in the abdomen; all theſe circumſtances, I ſay, appear to countenance the plan of *early tapping*, recommended by Dr. Fothergill; eſpecially when we conſider at what expenſe to the conſtitution many of our evacuating remedies operate; an expenſe, ſaved by the trocar.

In the late ſtate of this diſeaſe, it appears that even tapping itſelf may be of little ſervice; for though the liver in the above caſe was in the way to heal, when not immerſed in a liquor which was ſtrange to it; yet the texture of the meſenteric glands, &c. ſeemed ſo irrecoverably injured, that we find that the patient died, *though he was recovering from the dropſy.*

The nature of the fluid may be thought in ſome degree to have been influenced by the medicines; and I find theſe to have chiefly been as follows; having been variouſly employed either according to a change of plan or a change of ſymptoms. They are named without regard to order: being digitalis, cream of tartar, ſquills, ſeneka root, a ſolution of the terra ponderoſa in the muriatic acid, chalybeates, guaiacum, calomel with the draſtic purgatives, abſorbents, gums, oil, ſoap, opiates, and aſhes. From my occaſional knowledge of the treatment uſed, the aſhes (which were employed late) appear to have been the ingredient the moſt likely to have given activity to the powers of the fluid, as far as theſe were affected by medicine. But in favour of aſhes it muſt be ſaid, that if they ſharpened the fluid, they alſo ſeemed to contribute much to the evacuating it; and in any event, prudence requires this caſe to be compared with others, before we form any general opinions. It is enough at preſent to have ſhewn, what ſometimes may be an effect of dropſy, having an origin and a treatment as above related.

To this account of the treatment, in order to make it complete, I muſt however add, that blood was thrice taken. It had been ſerviceable in ſome other caſes, and the patient was young

and not deficient in blood. His friends, it seems, thought the measure useful; and the attending practitioner conceived, that it removed some unfavourable symptoms, from the character of the blood. For myself, I have often seen gentle bleedings act as a powerful alterative, and dropsy is generally dependent upon some other disease.

April 18, 1805.

History of a fatal Case of Hydrocephalus. By Dr. HARRIS, *of Kingston, Jamaica, in a Letter to Dr.* FARQUHAR, *dated July 30th*, 1805.

NOTHING tends so much to the advancement of medical knowledge as a faithful record of cases. It is not only profitable to the recorder, but it behoves him to publish his practice for general advantage. A candid practitioner will never be afraid to have his endeavours for the benefit of his fellow creatures canvassed by the public eye; because, self, not being his prevailing principle, he is conscious of having exerted himself both for the good of his patient and profession.

M. K. H. in her twenty-sixth month, a healthy child, of a very lively disposition, and uncommon sagacity, on the 20th of October, 1802, discovered symptoms of indisposition, from being more inactive than usual, but had no particular complaint. She took two grains of calomel at bed time, and was carried to the country next morning to stay a few days. She did not discover her usual desire for breakfast, and brought up some milk, she had taken, in a curdled state, some time after. Her mother gave her some magnesia, which operated once during the next night; and brought her to town on the morning of the 22d. I found her dull and heavy; but she had no symptoms of fever, farther than a small degree of partial warmth in the palms of her hands and the soles of her feet. As

she was about cutting her last jaw teeth, and complained of them, the gum being swelled, I scarified it. She then took an emetic, which brought up some green, undigested stuff, but it did not carry off the drowsiness. At night she took an antimonial, and passed a restless night; with an incessant short cough. This gave the idea of cold and indigestion being the cause of indisposition.

23d. She took castor oil which operated once, and brought away some ascarides. The antimonial was repeated at night.

24th. She took rhubarb and calomel, which came up with some phlegm. At night she took three grains of calomel, which operated three times before morning.

25th. The oil was repeated, which produced one motion. She passed this day in a kind of unwillingness to do any thing but slumber: but was much troubled with the cough. Her skin was cool but dry, and she was put into a tepid bath without any visible good effect; but seemed rather to oppress her breathing while she was in it.

26th. A restless night. The cough was incessant to-day; but did not call forth much affection when it attacked her. It seemed to proceed from the stomach; and, keeping her from sleep the whole night, an emetic of Ipecacuan was given her on the 27th, which lengthened the intervals of coughing the succeeding night.

28th. The stupor increasing and the pulse varying, though not above seventy in a minute, I began to be much alarmed at her situation; as she evidently grew weaker and weaker. My feelings were now so acute as to stagger my judgment: and I requested the assistance of some medical friends. Her bowels having been torpid since the last purgative, and suspecting worms, some assafœtida glysters were advised and administered at different times through the day; and a blister was applied

between the shoulders to relieve the head. Towards evening, she grew so alarmingly ill from the cough, unequal breathing and puffing of the belly, that five grains of calomel were administered, and followed up with two large spoonfuls of castor oil, some hours after at different times. Stimulating cataplasms were likewise applied to the feet. The blisters were dressed about the time the cataplasms were removed, and she had a respite of two or three hours of rest. During the night, she had a large fæcal discharge with the fætid glyster. The cough was somewhat relieved; but the pulse continued variable and unnaturally slow. It was remarkable that, notwithstanding the stimuli of the blisters, the cataplasms and the fætid glyster, besides several glasses of pure wine, there was no excitement in the arterial system, or heat on the skin. These symptoms, although ambiguous, might still be considered as proceeding from worms.

29th. The stupor continued although the pulse was not quite so variable: it was still however below the natural standard. A powder of rub. ferri, pulv. rhei and calom. ana gr. v. was given, and about two hours after, there was such a conflict between the disease and medicine, as was very alarming. She had a large stool which so sunk the powers of life, as wine and vol. frictions could scarcely recal. A blister was now applied to the epigastric region, and nourishment and wine administered frequently. The pulse soon became more regular, but still below nature; the skin cool. In the evening she had a large slimy stool; and had some hours of natural rest after having the blisters dressed. About ten o'clock, she grew restless and uneasy, with a slight return of cough. Two grains and a half of calomel and five of rhubarb were now given, and to be repeated towards morning if necessary. The first dose created some sickness at the stomach, which, in her very weak state, distressed her much: a glyster was therefore thrown up, which procured another slimy stool, and in two or three hours, she had a little rest.

Towards five o'clock in the morning of the 30th, she had another stool, dark and slimy. There was now a greater degree of warmth on her hands and feet than had been felt from the beginning: pulse the same as before. By moaning and sighing, she expressed great anxiety and debility. About eight A. M. her blisters were dressed, and tepid sponging with vinegar and water was used, which produced a little quietness and rest. Beef-tea, with table salt, sago, gruel, and wine, were freely administered. Soon after she had another slimy, dark stool. Symptoms now grew so alarming, as to create a strong suspicion of hydrocephalus internus. The shutting of her eyes, which was before attributed to coma, was now plainly discovered to be owing to the disagreeable effect of light. There were added to this symptom, a perpetual sighing and moaning, with long and interrupted respirations, an incessant motion in the left arm and leg, with frequent pointing to the head, and a much greater irregularity of the pulse than had been yet discovered. She was likewise quite inattentive to every thing that was said to her. To mitigate these symptoms for the present, five drops of laudanum and ten of æther were given to her, after letting her sit in the semicupium for a few minutes. During the effect of the opiate, her head was shaved, and a large blister applied, after rubbing the scalp well with camphorated rum. Mercurial frictions were now vigorously adopted, and five grains of calomel were given about nine o'clock in the evening. From the opiate and friction, the pulse was now more equal and full than it ever had been; and she remained pretty quiet and easy until ten o'clock; when another strong friction was performed, and an antimonial opiate, (twenty drops of the wine to ten of the tincture) was administered. This had no effect until past eleven, when she fell asleep. She rested until five o'clock, but moaned and sighed very frequently.

30th. After day light, it was discovered she had lost the use of the upper eye-lid; but opened the other as she had done for several days before, only toshut it immediately against the ef-

fect of light. During this afflicting ſcene, the poor little ſufferer aſtoniſhed every beholder in the diſcovery ſhe made reſpecting the affected eye, by placing her fingers on the right eye, while ſhe ſtretched open the left; which ſhe could not accompliſh before ſhe had ſhut the right! The motion of the left arm and foot remained the ſame. Had no extraordinary motion in the right. Was perfectly ſenſible. The mercurial friction was repeated this morning, and a ſtimulating glyſter, with Epſom ſalt was adminiſtered, which gave her two large, glareous, brown motions; after which ſhe opened her eyes better. The pulſe was fuller and more frequent, with more heat on the extremities. The pupils, particularly the left, much dilated for the firſt time ſince the commencement of her illneſs. The glyſter was repeated about ten o'clock, A. M. from which ſhe had another diſcoloured motion. A ſolution of the Epſom ſalt in a ſtrong beverage equally ſaturated with ſugar and lime juice, was now given by a ſpoonful at a time every half hour, until ſhe had an healthy-looking ſtool, about two o'clock, P. M. and another of the ſame kind within an hour after. She was now more obſervant; called for what ſhe wanted, and was more tranquil. A large bliſter had been renewed to the head which about this time ſhewed ſigns of diſcharging; it was ſuffered to remain on till night. Her nouriſhment, gruel, and beef-tea made palatable with table ſalt. Her pulſe was regular and full; her ſkin temperate; but the pupils ſtill dilated. She had ſeveral ſtools of nothing but the nouriſhment ſhe took. She became a little reſtleſs towards bed time; and ſhe took three drops of laudanum, and ſix of antimonial wine.

November 1ſt. Slept without moaning, and the bliſter diſcharged plentifully in the night. There was little or no affection of the left arm and leg; but the left eye was ſtill half cloſed, and both pupils enlarged. The mercurial friction was continued and an infuſion of bark was given. She lay quite paſſive all day, took nouriſhment when given, and had two ſmall

natural ſtools. Towards evening ſhe ſeemed much inclined to doze and ſighed a good deal. The pulſe was rather tending to variation from a ſeeming retardation of one pulſation now and then. A bliſter was applied to the occiput and neck after a mercurial friction. Theſe ſymptoms increaſed with a febrile heat and interrupted ſuſpirations, which ſeemed at times to be almoſt entirely ſuſpended. Theſe were attended with heavy ſighs and deep alternate groans. The right arm and leg became now affected in the ſame way as the left were ſome days ago, with alternate fluſhings of the face. The antimonial opiate (twenty drops to ten) was given about eleven o'clock at night, which by degrees ſubdued all theſe, apparently indomitable, ſymptoms into a ſleep which brought her to the

2d. With a regular pulſe at 116. She has not ſpoken ſince yeſterday noon; and that was very faintly, although ſhe has been perfectly ſenſible; for when ſhe heard the ſobs of thoſe around her, when they thought her dying, ſhe opened her eyes and looked ſteadily at them for ſome time. The powers of life ſeem wavering—the hands and feet continue hot, while every other part is temperate. Though the pupils ſeem ſomewhat leſs, the eyes have loſt their luſtre conſiderably. There is a rattling phlegm in her throat when ſhe coughs, which is now but ſeldom. There were ordered two grains of pulv. ſcillæ, one of calom. and ſix drops of the tinct. digitalis, with a mercurial friction. At ten o'clock the pulſe roſe to 120. Six drops more of the tincture: in leſs than one hour the pulſe fell to 100—full—ſomewhat variable. Lies quite paſſive, and ſighs frequently. Pulſe roſe again in ten minutes to 120. At twelve o'clock there was a general moiſture. She had paſſed ſome urine. The doſe was repeated, as at ten o'clock. At two o'clock P. M. the pulſe was at 135. She had paſſed more urine and was tranquil. Eight grains of tinct. digit. were given in beef-tea, and another mercurial friction applied. Had a large dark ſtool at half paſt three P. M. pulſe 135. A purging glyſ-

ter gave her a large motion, and she sunk into an easy sleep immediately; during which the pulse sunk to 112, at five o'clock P. M. At six o'clock pulse 120. Repeated the calomel and squills, with ten drops of the tinct. digitalis. At seven o'clock the pulse 103. Slept, after the fatigue of dressing her blisters, for two hours. A mercurial friction about eight o'clock. She grew a little restless soon after. Pulse 130. Had two pukes which might have been occasioned by increasing the squills to four grains. She was easy after it; and she fell asleep with the pulse at 116; and slept without interruption, but from nourishment, till almost twelve o'clock; when the symptoms which hitherto required the antimonial opiate began to appear, with a small pulse at 136, and alternate flushings. This hitherto powerful medicine was given in the same proportion as last night.

3d. She rested tolerably well, and was awakened to take nourishment. No flushing to-day; pulse 132; skin warm; had urined once; medicines continued. At ten o'clock A. M. she was so sick at stomach, as to have nearly fainted; pulse 120; a little toast and water settled her stomach, and she enjoyed some rest. She is averse from nourishment to-day; owing probably to her mouth being affected by the mercury. Had a slimy stool about one o'clock P. M. more general heat than usual; pulse 125. There is no strabismus; but the globes are directed more to the left than usual. The pupils seem somewhat contracted and sensible of the light. About five o'clock P. M. she had a large loose stool, which contained several leaves of a green resembling spinach, called in Jamaica, Caliloo, undigested. This was one article of which she ate on the nineteenth of October; took very little nourishment to-day; had another small stool at nine o'clock; attempted to give her the bark infusion with spiritus minder. but she could hardly swallow; breathes with some difficulty; pulse 130, regular. At half past ten o'clock pulse 145; more difficult breathing and swallowing. At eleven, pulse 150; administered a bark glyster, with

the antimonial. In ten minutes after, the pulse was 130, and breathing better. Two other attempts were made to throw up glysters; but they were ejected immediately. There have been several contractions of the ankle and wrist of the left side today. The pulse was fluctuating between 120 and 130. The antimonial was continued.

4th. The pulse 112 at five o'clock A. M. with an open skin and easy respiration. At six o'clock she had some nervous twitches in the muscles of the left cheek, while the arm and leg of that side were drawn up involuntarily. At these periods the pulse varied considerably. A stool gave some respite to symptoms; a purging glyster was thrown up without any effect but flatulence. The convulsive affections of the extremities and left cheek continued to recur, with increase every five minutes through the day, with additional quickness of pulse, even to 170.

My medical friends had taken leave since yesterday, and I was in a state of mind not to be described: however it suggested cupping. But unfortunately glasses could not be procured. I then resorted to musk merely to smooth the rugged path to death by convulsions. The musk and antimonial were continued the whole day, during the short intervals of the convulsions; and about six o'clock P. M. they were less frequent, and she shewed some disposition to sleep. I therefore resorted to the antimonial opiate once more in the proportion of six to twelve drops of the laudanum and antimonial. She was quiet for more than an hour; had no spasms, and turned herself with more freedom.

Nourishment and the drops were instilled through her teeth, which the weak powers of deglutition now and then sent into the stomach. The pulse averaged 150. At the same time as usual, the turn of the night, she grew worse, sighed and moaned; when twelve drops of antimonial wine, and six of laudanum were given which prevented a return of the convulsions. She had

some slumbers; and between whiles, two or three injections were given, which relieved her of considerable flatulence and some slime from the bowels. There were opiate frictions applied to the belly.

5th. Pulse 152, equal; a very small degree of contraction in the pupil. She moaned a good deal, as if from uneasiness in her bowels. An asafætida glyster was given, which was soon discharged with a considerable yellow tinge. Another was thrown up warmer which she retained about half an hour. Considerable symptoms of uneasiness led to the application of warm cloths to her belly. The glyster was discharged with the same appearance as the former. She was somewhat relieved; but moaned considerably. A tea-spoonful of gin in warm toddy was given, and another fætid glyster with ten drops of laudanum. At two o'clock P. M. pulse 148, regular and stronger; still moaning; took calomel grs. iij. aloes grs. ij. At four o'clock she passed the last glyster with some greenish fæces. She was quiet and slept till past five; deglutition better; took some nourishment; grew uneasy again between eight or nine o'clock, which was probably occasioned by the purgatives she had taken: however, the friction for some time of a hand over the abdomen, composed her again. Finding that the friction by a hand alone gave ease, the size of a nutmeg of mercurial ointment was rubbed in all over the surface of the abdomen in the direction of the colon, which in about twenty minutes procured a large stool of brown excrement and glareous matter. She took some nourishment and went to sleep.

The hands and feet, which have hitherto always much exceeded the temperature of the body, have this day shewn some signs of amendment, by being equally temperate with the rest of the body. Pulse 160; she grew restless at the usual period of midnight; when the left foot grew hot, with some approach to spasm on that side. An injection brought away another

ſtool, and ſhe was eaſier before one o'clock in the morning. There was obſerved a ſlight degree of inflammation on the ſclerotica of the left eye during this day. She had but little ſleep; pulſe 170; a coldneſs of both feet now took place extending ſoon as high as the knees. In half an hour this was ſucceeded with heat in the left foot, and ſtiffneſs in the left arm, accompanied with great reſtleſſneſs. Muſk was given in her nouriſhment which was ſwallowed without difficulty.

At one o'clock in the morning of the ſixth, all the left ſide was affected by ſpaſm, which was relieved by a glyſter, and ſhe lay compoſed till paſt two, when ſhe was attacked in the ſame manner, and another glyſter thrown up. This remained till about three, when ſhe paſſed it with ſome bloody mucus. From this time ſhe was lulled till half paſt four; when, on the return of great reſtleſſneſs, the antimonial opiate was given as laſt night. This procured about an hour's reſpite; after which there was a general tendency to ſpaſm, with much anxiety, toſſing and coldneſs of the feet; to which frictions and warm flannels were applied. At eleven o'clock the pulſe was 200; her bliſters were dreſſed; not much reſtleſſneſs now; but ſuſpirations very frequent; no ſpaſms have appeared lately; the mercurial frictions were continued; her belly, legs and feet were fomented for an hour or two with warm bark decoction to incite the return of heat; but the powers of life were not now to be recalled. She expired at nine o'clock in the evening!

Upon opening the head, the blood-veſſels appeared much diſtended; but there was no extravaſation or ſerous effuſion between the membranes. Upon removing the membranes, the fulneſs of the veſſels on the ſurface of the brain, exhibited their ramifications in a moſt beautiful manner; and upon cutting through the corpus calloſum there were found between three and four ounces of a pure limpid fluid. This was ſufficient to account for the death of the child without going further.

From these appearances we may reasonably presume that, had the disease been suspected in its first stage, there might have been some probability of success from lessening the quantity of blood in the head, either by leeches, arteriotomy, or cupping, and by the early use of blisters and setons, accompanied by the powerful effects of mercury.

Two of these remedies were vigorously persisted in; but, alas! at too late a period, although they were applied two days before any dilatation of the pupil took place. Even their late use evinced their power on the disease in a very striking manner.

Improper indulgencies in diet may be considered as pre-disposing causes of hydrocephalus internus; for an healthy state of the stomach is absolutely necessary to a proper discharge of all the animal functions. It is true we are not sufficiently acquainted with the functions of the brain to account for the production of its diseases; but we know that its structure is so wonderfully fine, as to be easily affected by the derangement of the fountain of health, the stomach; especially if other causes operate at the same time; as was the case in the present instance. Much might be said upon this part of the subject; but it is sufficient to remark, that we are too apt, if a child is generally healthy and endowed with good digestive organs, to let affection outrun judgment, in giving what ought to be denied to its utmost importunities. Such gratifications are fraught with disease. But, besides the benefit that a resolute conduct in this respect would afford to health, a proper restraint is wholesome in a moral sense; in teaching children obedience and habituating them to early self-denial, which will arm them against many future mortifications in life.

Before and on the nineteenth of October, there was neither "heaviness of the eyes, nor diminution of nervous energy, nor drowsiness," nor, in short, any of the other symptoms which

diſtinguiſh hydrocephalus, or indeed any other complaint. On the contrary, full and blooming health prevailed in an eminent degree; ſo as to be particularly remarked by the family, with whom that day was ſpent in the country. Being thus lulled, as it were, into ſecurity, the child was careſſed and ſuffered to eat perhaps of improper things at a much later hour than uſual to her. She was brought home late; and it was a rainy evening. Under ſuch circumſtances the treatment during the former period of her illneſs was certainly rational, though unfortunate. When the ſymptoms became more characteriſtic of hydrocephalus internus, it occurred to me that ſhe had a fall ſome five or ſix weeks before; which, having left no ſigns of leſion whatever, had been entirely forgotten. None of her numerous connections had been ever ſubject to the diſeaſe: ſo that there can be no room to lay this diſeaſe to conſtitution. Her head was rather of the ſmalleſt ſize, with a very compact bone.

Here a query naturally ariſes, viz: could water collect in the ventricles of the brain, to the quantity of more than three ounces in ſo ſhort a time as eighteen days? Or could the fall be the cauſe of the diſeaſe, without ſhewing ſome ſymptoms of it before the twentieth of October which was the firſt day of any illneſs? In the firſt inſtance, obſtructed perſpiration from cold, when that evacuation was copious after a full meal, might probably have laid the foundation of the diſeaſe on the evening of the nineteenth; when the further aid of deranged ſtomach and bowels might have contributed towards its progreſs, by deſtroying the balance between the exhalents and the abſorbents. And, if it be true, as the ſagacious Rowley obſerves, that vomits contribute much towards producing the dropſy of the ventricles of the brain, the accumulation muſt have been accelerated in this caſe by the treatment at firſt. If a fall was the primary cauſe, the high health which the child enjoyed after the accident muſt have retarded the formation of the diſeaſe, until the above morbid actions took place; and theſe would probably ſeize on that delicate part which had before ſuffered concuſſion.

Since the termination of this case, I have perused Dr. Rowley's ingenious treatise on hydrocephalus membranarum with much pleasure and information. He says that it generally precedes hydrocephalus internus. The Dr. mentions several symptoms that did not occur in the above case: but as the drowsiness and listlessness to action occurred in the beginning, as he mentions; it may be asked could the dropsy of the membranes be changed into that of the ventricles without having any marks of the first disease to be seen on dissection? Or may not drowsiness or listlessness to action, accompany a morbid state of the stomach and bowels; or a case of worms? It appears from the above case,

1st. That diseased action of the stomach and bowels, and obstructed perspiration may prove the proximate cause of *hydrocephalus internus*.

2dly. That *hydrocephalus internus* may be occasioned by concussion.

3dly. That *hydrocephalus internus* did not exist before, but must have commenced on or after the nineteenth of October; when, the powers of health being abstracted, any injury formerly sustained, might have commenced its action on the brain.

Although *hydrocephalus internus* has been very correctly described by several eminent authors; it appears that the disease has been too often overlooked in practice on account of the similarity of symptoms with other diseases incident to children. I must confess that I have considered it as a rare disease, until the fatal termination of this case, which came so home to my feelings, as to induce me to look back with regret on several cases in which I might have overlooked the disease.

Happy would it be for mankind, if each individual would profit by the consideration of the errors he has committed either in theory or practice. Severe as the sacrifice may be considered to the feelings of human nature, I should be happy could I be assured that the record of a case which has deprived me of the endearments of a beloved and most promising child, may be the means of information to myself, or comfort to other parents, in warding off the fatal stroke from their offspring!

I cannot but lament the general repugnance that prevails here among medical men, to inspect bodies after death; as it is the only true source of information, and ought to be an unvariable rule with every practitioner, when he cannot clearly ascertain the cause of death, strongly to solicit for permission to search for it by dissection. Such general conduct would evince to the world that the love of information and improvement in the art of preserving life was of much higher consideration in the minds of medical men, than the accumulation of wealth.

As all the means, to the best of my knowledge, which have been recommended by others, have been unsuccessfully tried in the above case; it only remains to say, that this fatal disease may be much easier prevented than cured. Indeed if means of prevention were more studied by practitioners and parents, there would be less occasion to prescribe remedies for the cure of infantile disorders in general.

The precepts laid down by Dr. Rowley, respecting children, at the end of the work already mentioned, are judiciously adapted to all capacities, and ought to be generally studied.

Scarifying the gums has been objected to by some practitioners, under a false notion of producing a cicatrix firm enough to impede the progress of dentition: but when Dr. Rowley forbids this operation to be performed "too early," his caution

cannot be considered as favourable to that opinion; for experience confirms that, when the swelling and inflammation evidently shew that one or more teeth are at hand, the only mode of giving instantaneous relief from any violent symptoms threatening convulsions is, not only to open, but to take off a portion of the gum down to the advancing teeth.

Opinions may sometimes lead to improvement; but, when experience has established a fact, opinion should yield; because in founding a practice on this, without being sanctioned by the other, we certainly lead ourselves and others into much dangerous error. The experience I have had in the good effects of mercurial preparations against malignant fever, and in diseases of children, induces me without hesitation (whatever violent condemnations have been uttered against them,) to recommend the practice in the early stages of those (if neglected) most dangerous affections in both periods of life.

Both malignant fever and hydrocephalus internus, in their advanced stages, seem to resist the power of mercury in a similar degree; but both, I presume, may be prevented or obviated in their fatality, by the powerful agency of this medicine on the system, before the torpor, which these diseases create, takes place too firmly on the animal functions, and thereby renders its operation inert. In the same manner therefore as I have advised (see Medical and Physical Journal, volume ix) all who may be obnoxious to that fever to prepare against it, do I now recommend calomel to be frequently given to children, to guard them against hydrocephalus internus: for it is to be feared that this dire disease is more fatal to them than is generally suspected; and that, from the similarity of symptoms, the cause of death is too often attributed to worms or some other imaginary disease.

I have only to add that, as I have always kept an eye of suspicion on every fever, attacking a stranger to this climate, ever since the commencement of this scourge to the West Indies in

1794; I have found that a prompt and vigorous practice at the beginning had a decided advantage, when malignity, although not at first suspected, supervened in a few days. So it may be with hydrocephalus, if symptoms are in the least ambiguous; for, if the case should be either worms or infarcted bowels, the mercurial treatment recommended in hydrocephalus is equally applicable to these. Evacuations from the head will depend upon circumstances attending the state of the sensorium.

An Account of the Efficacy of a Salivation, in curing Pulmonary Consumption, in a Letter from Dr. MAXWELL M'DOWELL, *of York-town, in Pennsylvania, to Dr.* BENJAMIN RUSH.

YORK, *November 6th*, 1805.

DEAR SIR,

IF you should be of opinion that the following case of phthisis, which yielded to the powers of mercury, will contribute its mite towards establishing a confidence in a remedy, at present unpopular, you are at liberty to make what use of it you may think proper.

Mr. D. aged about thirty years, whose thorax is of a structure favourable for the production of pulmonic complaints, observed his health gradually declining for the last two years: he at length became so much alarmed at his situation, as to send for me on the tenth of September last. I found him very much emaciated and labouring under a distressing cough, with a moderate purulent expectoration. He had profuse night sweats; his appetite entirely gone; his pulse was small, frequent, and feeble. I left six of your "antimonial powders" with him. On my next visit to him, he told me he could not take the pow-

ders, as they were so very unpleasant to his taste. I then furnished him with a few papers, each containing three grains of calomel, directing him to take the contents of a paper three times a day. I requested him to drink cold water, or water with a toast of bread in it. On the 17th, he complained of soreness in his mouth;—19th, a copious ptyalism, and his cough removed;—25th, a concentration of disease in the glands of his mouth. By means of the officious interference of some *benevolent* old ladies, who lay claim to a large portion of *experience*, my patient now became dissatisfied with his sore mouth, and I believe was upon the point of dismissing me. I entreated him to consider that his cough had left him; that he had no night sweats, and that his appetite was considerably restored. I endeavoured to make him acquainted with the manner in which the sore mouth would remove his original disease. My arguments, however, were not sufficient to remove the fears which had been raised in his mind, and he insisted upon having something to cure his mouth. I gave him some flor. sulphur; but prescribed it in such small quantities as would not be likely to lessen the mercurial disease in a short time;—29th, he informed me that through the importunities of his female visitors, he applied to a physician in town, who gave him a wash to cure his mouth. He had applied the wash only once, till he began to reflect upon what I told him respecting the operation of the mercury. He now expressed a willingness to submit entirely to my directions, and let me determine when his mouth was to be healed. His mouth was something better, and I was apprehensive that the quantity of sulphur which he had taken would remove the mercurial disease before his lungs could be restored to a healthy state;—though he was willing to let his mouth remain in its present situation as long as I thought necessary; yet he would not permit me to increase its soreness.

October 7th. His mouth was well; he felt a slight pain in his breast for two or three days which then disappeared, and he has, ever since, been perfectly free from all pulmonic complaints. I requested him to procure a flannel shirt and wear it the ensuing winter.

November 6th. He says he is at this time, in better health, and more fleshy than he has been for seven years.

With due respect and esteem,

I remain your humble servant,

MAXWELL M'DOWELL.

An Account of two Cases of Dropsy, cured by the Loss of Blood, extracted from a Letter from Dr. JAMES W. WALLACE, *of Fauquier County, in Virginia, to Dr.* BENJAMIN RUSH. *Dated December 16th,* 1805.

1802. KEMBLE, aged fifty-five, after much exposure to cold and wet during the winter, was early in March attacked with the usual symptoms of dysentery: but not in violence sufficient to confine him to bed. Bloody and mucous stools, tormina and tenesmus continued about five weeks, when they gradually subsided; but a colliquative diarrhœa followed, occasioning great emaciation and debility.

About the beginning of May, he discovered an abdominal increase, which about the middle of June had arisen to as complete an abdominal dropsy as I ever saw. I have by the operation of the paracentesis of the abdomen, from patients not more swelled, obtained, I think, fully thirty pounds of water.

At this time I was called to him; after ſome hours converſation, in which I explained the nature of aſcites, he refuſed the uſe of all internal remedies—adding he never had, nor would ever take phyſic. After ſome perſuaſion, he conſented to the loſs of blood. His pulſe ſtrongly indicated that evacuation. I drew twenty ounces, which exhibited a buffy ſurface. He was ſenſibly relieved in his feelings; and that night diſcharged more urine than was uſual for him to diſcharge in forty-eight hours.

The next morning I repeated the bleeding, the blood buffy; when I left him I directed the loſs of ſixteen ounces every third day until he ſhould loſe three pounds more of blood; my directions were complied with.

The third week after I left him he viſited me on horſe-back, thirty miles diſtant from his dwelling, not a ſymptom of dropſy remaining; he had not recovered his fat, which however he did in a few weeks. He obſerved to me, that the ſecretion of urine continued to increaſe until it diſturbed his ſleep.

Mrs. ———— aged 45, was in April laſt attacked with ſymptoms of univerſal dropſy. She was ſwelled literally a capite ad calcem; in this ſtate, her catamenia flowed immoderately for ten days; ſhe took no remedies, not even the teas ſo liberally preſcribed by her ſex on all occaſions. The dropſy entirely diſappeared; her urine was diſcharged in full quantity upon the appearance of the hæmorrhage.

Mrs. ———— as is uſual at her age previous to the entire ceſſation of the catamenia, has menſtruated irregularly for the laſt twelve months.

In July the hydropic ſymptoms returned and increaſed until the middle of laſt month; when I was called to her, and found her head, abdomen, ſuperior and inferior extremities very much

swelled. She could not walk across the room without losing her breath; pulse tense and hard; urine scarce; very costive, and an immoderate uterine flux: as in the case of Kemble, she refused all internal remedies; and even bleeding.

In this situation she lay eight days without the aid of any remedy. I was again called to her and found every hydropic symptom removed; her breathing though quick was free.

The uterine hemorrhage still continued; and I had then to use every art to restrain it—which was successfully done by an astringent injection, which has never failed after the phlogistic action is removed.

Case of Worms in the Urinary Bladder. By Dr. MATTHEW WENDELL, *of Albany, New York.*

SIR,

SHOULD you deem the following case of *worms* in the *urinary* bladder, worthy insertion in your useful Museum, the credibility of which can be attested by several medical gentlemen of the first respectability, you are at liberty to publish it.

C. Delamatter, Esq. of Hudson, (New York,) aged 51 years, of an industrious and regular mode of life, and habit of body, was about the 12th of August, 1803, suddenly attacked with symptoms of strangury, voiding small quantities of urine, with repeated inclinations, attended with itching and some pain in the glans penis. These symptoms continued without evident increase or abatement till the twenty-ninth; when he was taken with a sharp

ſtinging pain in the left ilium, which he deſcribed as paſſing through from the lumbar to the hypogaſtric region, in a direction from above, ſlanting downwards. With this pain the ſtrangury increaſed; at evening, the pain had extended over the abdomen and breaſt, occaſioning anxiety and ſome difficulty in breathing.

30th. I was requeſted to attend. He had paſſed a reſtleſs night, attended with partial perſpirations; complains of headache; anxiety about the præcordia; great depreſſion of ſpirits; thirſt not great; appetite indifferent; ſtate of the bowels regular; ſtrangury as yeſterday; pulſe weak, at 60. Ordered opium one grain, every three hours; warm flannel applications to the abdomen; to drink freely of diluents and diuretics, as weak broth, or infuſion of parſley.

31ſt. Had reſted well; anxiety removed; perſpired freely during the night; had voided a conſiderable quantity of turbid urine; his appetite is better; thirſt as uſual; and the pain in the ilium remaining as before; ordered a continuance in the above preſcriptions.

September 6th. Was called again. The ſtrangury was increaſed conſiderably; pain in the ilium ſtill remaining; pain in the left ſide; a frequent dry cough; pulſe natural as to frequency though reduced in force; in other reſpects as uſual.

7th. Had ſlept well; cough abated; ſtrangury relieved; pain in the ilium as uſual.

10th. At night the pain removed gradually from the ilium, and iſchuria ſupervened.

11th. Severe pains with diſtention of the abdomen; introduced the catheter without any ſenſible obſtruction, and evacuated a full quart of a clean citron-coloured urine.

12th. At night introduced the catheter again; and after evacuating about one pint, the flow of urine suddenly stopped. He immediately remarked that something had entered the catheter; as the sensation he experienced was similar to that of a worm creeping and occasioning a tickling in the parts, together with a severe pressure which caused great pain. On withdrawing the catheter and knocking it forcibly in my hand, a substance fell out of a round figure between seven and eight inches in length, of the thickness of an ordinary-sized catheter; this substance was of a dark red colour, very elastic; at one extremity it was thicker than at the other, and within an inch of the small extremity it appeared lacerated; its large extremity was firm and round. The patient complains of a tickling sensation in the urethra, and is confident of similar substances being still in the bladder.

13th. Had rested tolerably; the ischury removed, and the strangury as before the 10th; had voided without much pressure during the night, near one pint and a half of urine. At three o'clock introduced the catheter again; the same effects followed. On examination, two substances, the one about four and a half inches, the other near three inches in length, of a colour similar to the above, with whitish streaks. They have the shape and appearance of the worm, lumbricus species. The one is perfect, with a white circle within half an inch of the large extremity, and somewhat elevated, its large end firm and round; its small end flat and depressed. He could plainly distinguish his sensations on this occasion, and observed that two substances had entered the catheter. In consequence of the severe pressure this day, he was taken with the hæmorrhoids, and some fever. Nine o'clock, catheter introduced again with the same effects as in the afternoon; he again mentioned that two substances had entered, occasioning great pain, &c. On withdrawing the catheter, two substances similar to the above were observed.

14th. Catheter introduced again, and discharged near five gills, with a similar substance.

15th. Had the orifices of the catheter enlarged in an oval form; introduced again, with the same appearance somewhat lacerated. During last night he had voided without much pressure half a pint of urine; in this was observed a substance as above. Having introduced the catheter thus enlarged without any appearance as above, and the patient urinating tolerably free and easy, I concluded that there were no more of those substances in the bladder.

17th. The strangury entirely removed, and in every respect well, though weak.

In the above statement I have omitted mentioning the prescriptions since September 6th, as they were those which were suited to the different indications, and of approved authority.

The uncommon occurrence of cases similar to the above, must apologise for the minuteness of its relation; and to remove all doubts with respect to its credibility, I have in my possession at present one of the worms, perfect in every respect.

Reflections on the above Case.

The lumbricus or round worm, is one of the species of worms, which is, at times, found in the human intestinal canal: Whether they are to be considered as interlopers, whose presence can on all occasions be dispensed with; or whether "they are kindly sent by nature, to prevent diseases of excessive nutrition," is not for me to determine. Their generation, from ova in the intestines taken in, either by the mouth or some other way; their maturation by the heat of the intestines and neighbouring parts, and their support and nourishment from the chyle and other fluids, being taken for granted, the above case of Mr. D. pre-

sents matter for speculation; which may be reduced to two propositions.

1st. That these worms were originally ova, taken up by the absorbents and deposited in some part of the left kidney, and there matured: Or,

2d. That being matured in the intestines, one more intrepid than the rest, "pursuing his labours in his own way," without too much regulation, formed a passage for himself, and the others followed. The first of these propositions, from physiological deductions, cannot obtain; for to trace in imagination those ova absorbed by the lacteals, now mounting the thoracic duct, then emptied into the subclavian vein, now performing the lesser circulation, and finally deposited in the kidney, and there matured, in mad opposition to the absorsive quality of the urine, and to the free passage thereof, appears rather problematical. And this more especially as we can with greater ease, and of course more rationally, at least in supposed cases, account for their appearance by a few corollaries founded on our second proposition. "As the colon is connected to the left kidney," could not these worms have made their passage this way? Was not the stinging pain experienced by the patient for near two weeks without intermission, indicative of this? Were not these worms the cause of his dry cough, head-ache and anxiety, and indicative also of their presence in the intestines? These worms are extremely elastic, for they passed through the small holes of a common sized catheter, and recovered their form again. Was not the vermicular motion so distinctly observed by the patient, indicative of their being alive in the bladder? Could not the first have produced the ischury by its entrance into the urethra, and on the introduction of the catheter, been forced back and occasioned its laceration? This possibly may be objected to, by reason of the serious consequences attending it; but are there not repeated instances in which pins, needles and other hard substances have been swallowed, and after some

time penetrating the coats of the intestines, and making their way through the parietes abdominis. Again, when we reflect on the circuitous rout which they must have taken, in case of admitting the first proposition: how liable they were to be deposited in some other parts, or thrown off by some other outlet: when we reflect on the great quantity of blood sent to the kidneys, and its greater fluidity, of course its absterfive quality serving to wash away substances much larger than those ova could have been; and also on the non-nutritious quality of the urine; all these considerations militate against the first proposition, and tend by analogy to establish the second. Could not their presence in the kidney, by sympathy have produced the symptoms under which he laboured? At the time of their exit from the kidney, through the ureter, was not this the cause of the ceasing of the pain in the ilium? Was not their presence in the bladder the cause of the ischury?

MATTHEW WENDELL.

Dr. JOHN REDMAN COXE.

Case of Worms, &c. discharged from the Stomach. By Dr. CLEMENT STANFORD, *of Wicomico Lower Ferry, Somerset County, Maryland.*

November 26th, 1805.

SIR,

IN compliance with a circular letter received from you, dated July 11th, 1804, I now take my pen to give you some small information, of what, in my opinion, is an uncommon case.

In the latter end of September last, I was called to see Mrs. P. R. a married lady of a creditable family, of about twenty-eight or thirty years of age; who informed me that she had not

been right well for several years, but at that time complained particularly of slight chills, a sick stomach with vomiting, high fevers with pains in her head, and frequently with considerable pain in her stomach, and that she had often vomited a number of small round worms, which I supposed to be what are generally called the true stomach worm, for which I advised an emetic, afterwards a mercurial purge, and then bark with elixir of vitriol.

Upon my second visit, I was informed that the emetic had operated well, and that she had vomited a number of black bugs, and some worms, which brought me to a strict inquiry of the patient and her attendants, by whom I was informed that she had been in the habit of vomiting of bugs in likeness to what is called a black bess, but smaller, for eighteen months back.

The worms were of different descriptions, some having legs, and were striped crosswise; others were white with black heads. She also informed me that she has had for five years back, an obstruction in her menstrual evacuations. As her constitution appeared to be very strong and the habit full, I concluded to give mercury in such a manner as to bring on a salivation, in order to produce a revulsion; and thinking that it might have some effect in the destruction of those stomach inhabitants, (if I may be allowed the phrase) it was accordingly done and kept up for three weeks; afterwards gave the bark and steel. She now appears to be better; as she strengthens, her menstrual discharge increases.

A few days ago she consented to take a vomit to see if there were any more of those bugs remaining, (in presence of her family, a gentleman of respectability, whom I purposely took with me, and myself,) when we procured from the contents of the stomach, one of the bugs of a smaller size; which upon examination was found to have wings to be put out and taken in, similar to the tumble-bug; one of the white worms with

legs, the small end of which, appeared, by its crawling, to be the head, with a black spot on it; and several flies, some of which, as soon as they could get their wings dry, would fly away. I have sent you several for your inspection. You are at liberty to make any use of this that you, in your superior judgment, may think necessary. Query—Whether or not are those animals naturally formed in the stomach; or are they first taken in with the water and then generated in the stomach? If there is any other information wanting on this subject, you will signify it by letter, and I will give any satisfaction that is in my power.

I am, Sir,

Yours, with respect,

CLEMENT STANFORD.

P. S. If this case should appear doubtful, the affirmation of the above gentleman can be procured.

C. S.

DR. JOHN REDMAN COXE.

☞ One of the insects forwarded, appears to be of the family *Gibbosa*, in the genus *Staphylinus*. The worm alluded to seems to be the larva of the above. The bug is probably of the genus *Chrysomela*. The former of these feeds on carrion. These insects are deposited in Mr. Peale's Museum.

Editor.

Case of ruptured Uterus. *By Dr.* WILLIAM DEWEES.

Philadelphia, 6th Feb. 1806.

DEAR SIR,

I ENCLOSE you a case of ruptured uterus, with a few observations. Should they prove of sufficient importance, they are much at your service.

I am, Sir,
With sincere esteem,
Yours, &c.
WILLIAM P. DEWEES.

DR. JOHN REDMAN COXE.

On the 18th September, 1796, at three o'clock in the morning, I was called to the wife of Anthony Secane. She had been taken in labour about six o'clock the preceding morning with her third child. The account I received on my arrival from the midwife, was, "that her labour began regularly and smartly; that the presentation was natural; the mouth of the uterus dilated kindly, and the waters had escaped about an hour after her arrival; that from appearances, she expected delivery would have been effected by o'clock, (that is about two hours after its commencement); in this she was disappointed; the pains continued with more or less violence all day, and the succeeding night; that towards morning, (twenty hours after the labour had begun), she screamed out from sudden pain about the left groin, and upon examination, per vaginam, the child not be felt, though very easily touched before; a faintness succeeded, with severe puking of blackish matter; violent palpitations of the heart, great anxiety and restlessness." About an hour after these events had shewn themselves, I was sent for. I found her in the condition just mentioned, together

with cold extremities, profuse cold sweats, laborious respiration, and an almost imperceptible pulse.

From the symptoms present, and the account received from the midwife, I immediately suspected the nature of my patient's disease; and before I examined her, mentioned my opinion, and also the most probable consequence. I now proceeded to satisfy myself, and found my conjecture realized. The child with the placenta had escaped from the uterus, through a rupture at its left anterior part, just at its junction with the vagina, which was at this time sufficiently large to admit of the passage of my hand without the least difficulty; the uterus was situated just above the projection of the sacrum, and was contracted very firmly, and of the size it usually is at this period, after it has parted with its contents. The child and secundines were found lying in the cavity of the abdomen among the intestines; and never shall I forget the horror with which I was seized when I found my hand among them.

I took hold of the child by the feet, and delivered it immediately without the smallest difficulty; this I considered the only alternative; and this from the time that had elapsed, as well as from the nature of the accident, was less than a forlorn hope. The placenta was with equal ease withdrawn.

The puking with the other distressing symptoms still continued; she complained of excessive thirst; but the liquids she drank were instantly rejected; the pulse now was so extremely frequent as not to be numbered, and so small as scarcely to be felt. Her distress and anxiety were great beyond conception; calling upon all around, either to help or kill her. In this situation she continued until about seven o'clock, twenty-five hours from the commencement of her labour, and about five after the rupture of the uterus.

Leave was obtained to inspect the body, and my friend Dr. Physick, very obligingly assisted me in it. On opening the abdomen, several quarts of very dark bloody fluid were found in it; part of which was doubtless the blood that escaped from the lacerated parts, and the rest perhaps was an increased quantity of the fluid natural to this part, or portions of the peritoneum relieving themselves by effusion; together with a part of the liquor amnii, as we cannot suppose all escaped at the rupturing of the membranes. The stomach and intestines bore marks of high inflammation, and in many places approached gangrene. The whole lining of the abdomen partook of the same appearances.

The pelvis on examination was found faulty at the superior part, by a projection of bone or an exostosis; it was situated a little to the left of the symphysis pubis, and looked towards the base of the sacrum; it diminished the superior cavity of the pelvis in the direction of its small diameter about half an inch; it was sharp and pointed at its extremity.

The uterus was firmly contracted; its body and fundus participated in inflammation with the abdominal contents, while its neck, or that portion which constitutes neck when not impregnated, was in a state of gangrene, or perhaps sphacelus, excepting a small portion of the posterior part. The connection between the uterus and vagina was destroyed nearly two-thirds round; the laceration extended into the body of the uterus about an inch in its contracted state.

The projection of the bony process just mentioned, by diminishing the cavity of the pelvis, must be regarded as the remote cause of this accident. The child's head enveloped in a portion of the uterus rested against this point so long, that inflammation and gangrene were the consequence. The efforts of the uterus continuing violent; and perhaps that violence increased by

the difficulties which opposed them, eventually gave way, as its substance at this particular part was much weakened by the changes produced on it by inflammation; nay, the bony tumour acted somewhat like a cutting instrument. This unfortunate woman had been twice delivered by the crotchet, which from the nature of the deformity, was not necessary; and from the time that was allowed to elapse, not warranted on any principle of sound practice; as there was every reason to believe the children were alive when it was employed.

The nature of this deformity must have readily been discovered, had an examination been made of the superior strait, for it was immediately perceived when I introduced my finger into the vagina: nor did it exist in such an extreme as to indicate the crotchet, as there was still near four inches at this part of the pelvis, and consequently the delivery was not retarded by its smallness, but by the bad direction it gave the head; that is, obliging it to present too transversely at the superior strait, by which means one of the parietal bones, and that near its protuberance, must have rested on this bony edge, which of course would prevent its descent.

Had this woman's children been small, she might have been delivered naturally; or had the head presented with its vertex towards the right acetabulum, its direction with respect to the superior strait would have been so diagonal as readily to have passed this projection. I cannot however undertake positively to say the head did not in any one instance present in this way, but presume it did not, as the crotchet was employed in the former labours, and a rupture of the uterus was the consequence of the last; besides, this presentation is by no means as frequent as the one where the vertex is to the left acetabulum, not occurring once where the other does ten times.

Be this as it may, her children most probably, and herself most certainly, might have been saved by turning, for not the least difficulty was found in making the head pass the superior strait when I delivered the child from the abdomen; a proof of sufficient room was the head made to engage properly, or head reversed, for when we deliver by the feet, the head engages like a wedge, from a small to a larger diameter, and will pass very readily in this direction when considerable difficulty might be experienced from the other; another advantage to be derived from this change of situation of the child, is that we can constantly make the head obey a diagonal, or a completely transverse direction, either of which would, I trust, have saved the children and mother. In a pelvis of this kind I conclude the exclusive indication is turning.

I did not hesitate a moment to deliver my patient after I discovered her situation, though I proposed no success to her friends; death I thought inevitable in either case; from delivery there was a possible chance for life, from neglecting it none. The propriety of this reasoning however has been called in question, as it is conceived any attempts to save the patient, is but to prolong her misery.

No point of obstetrical practice is more unsettled than this; but why it is so, is difficult to say, since it may become obedient to rule, without the smallest difficulty, or involving in it the slightest doubt, or contradiction.

We have three principal directions on this subject: by the first we are told it is improper to do any thing, since it is conceived no effect can be availing; the patient is here allowed to expire without an endeavour to save her; of this class were the respectable Dr. W. Hunter, Dr. Denman, and some others of less celebrity. Dr. Douglass in a treatise on this subject has

combatted this mischievous supineness so successfully, that it would be idle to say any thing more on this subject.

By the second, we are recommended to deliver as expeditiously as possible through the pelvis; this practice is sanctioned by more numerous, and not less respectable names than the first, among whom we may mention, La Motte, Levret, &c. This plan has a decided preference over the other, since it offers assistance, and some women have escaped from death by it.

By the third, we are taught to believe the woman has no resource but in the cæsarean section: this plan, agreeably to Baudelocque, was originally suggested by the ingenious but timid Levret, but in terms so indirect, as clearly shews both his knowledge of the subject, and the prejudices it would have to encounter.

Having thus briefly stated the various opinions of authors on this subject, I shall take the liberty to say, that either is wrong if implicitly followed; and to be right upon this subject requires the adoption of all three, as circumstances may require. It must however be remarked that, the first can never be followed without incurring the imputation of blameable timidity, except where the patient is absolutely in articulo mortis; here we may withhold aid, as nothing can benefit the expiring sufferer.

The second plan cannot be implicitly followed; for instances have occurred where the rupture was through the substance of the uterus; and as soon as the child has escaped either entirely or partially into the abdomen, the aperture is so much diminished by the contraction of the uterus as to render it impossible to deliver it through the accidental and natural passage. But, when the rupture happens, about the junction of the uterus with the vagina, which is by far the most frequent, and at the same time is not subject to the diminution of size just spoken of; the se-

cond mode is exclusively indicated, unless such deformity of pelvis is connected with it as would render the passage of the child through it impossible.

The third plan, I conceive, is only admissible, first, where the rupture has happened to the body of the uterus, and delivery through the vicarious passage, rendered impossible by its contraction. Secondly, where there is complicated with this accident, such deformity of the pelvis, as at once to forbid any attempt at delivery through it.

An Account of the Efficacy of the Acetate of Lead in Uterine Hæmorrhage. By GEORGE E. MITCHELL, M. D. *&c. of Elkton, Maryland; communicated to Dr.* JACOB D. WACKER, *of Fredericksburg, Virginia. Transmitted to the Editor, February 13th,* 1806.

DEAR SIR,

AS experience is the only true way to obtain a perfect knowledge of the virtues of medicine, I feel disposed to inform you of my experience of the efficacy of acetate of lead, in several cases of uterine hæmorrhage, which have occurred in my practice, since I left the university of Pennsylvania. Although I was induced to believe it a valuable implement in the hands of a physician, in this form of disease, from the encomiums of professor Barton, yet my experience has greatly confirmed that belief; it has also convinced me that a student of the present day, may put more confidence in the recommendations of our professors, than many of the ancient writers are entitled to.

I have had five cases of this disease, in all which, this medicine was prescribed with evident success; in several of these ca-

ſes blood-letting was uſed as it was indicated by the pulſe. The acetate of lead was uſed according to the urgency of the caſe. I generally commenced with one, two, or three grains, to be repeated every three or four hours, which always had the effect it was deſired to produce. One caſe which was alarming and obſtinate, and which had been treated with the common remedies in this diſeaſe, will convince you of its ſuperior efficacy.

A lady of delicate make, aged 29 years, was ſeized with uterine hæmorrhage; her phyſician had properly preſcribed according to the ſtate of her ſyſtem; blood-letting had been uſed ſeveral times. Aſtringent powders of ſulphate of alumine and gum kino had been given every hour; proper local applications had been uſed without much apparent advantage. The woman was much reduced, and ſhe, as well as her phyſician, was ſenſible that her complaint, if not ſoon checked, would terminate her exiſtence. I was conſulted in her caſe, and recommended the acetate of lead: this practice was novel to the attending phyſician; but he agreed it ſhould be tried: I prepared a doſe of five grains, made into a bolus, with mucilage of gum arabic, and gave it her with a determination to repeat it, if it was found neceſſary; but in one hour it was evident the pill had produced the deſired effect: the hæmorrhage was ſtopped, and did not return; next day ſhe was ordered tonic powders of rubigo ferri, and columbo, which ſoon reſtored her to her former ſtate of health.

Another caſe I think proper to relate to you. On the 25th of July laſt, I was attending a patient in the houſe of a gentleman in this neighbourhood, and whilſt performing the operation of blood-letting, the lady of the family came into the room; ſhe was in perfect health; but ſoon complained the ſight of the blood made her ſick; ſhe haſtened into another room, and was immediately taken with a profuſe uterine hæmorrhage. I was called in, and as ſhe was far advanced in pregnancy, and the hæmorrhage alarming, I concluded her in very imminent dan-

ger. As ſoon as poſſible, I gave her about five grains of this medicine, which very ſoon produced the wiſhed for effect. Since which, at the proper time, ſhe has born a healthy child. I have uſed it with ſucceſs in active, and paſſive hæmorrhage, without the aſſiſtance of any other remedy.

In the third caſe in which I have preſcribed this medicine, I was alarmed to find my patient in a profuſe ptyaliſm. I was accuſed of having uſed mercury, but conſcious I had not given her any, could attribute it alone to this medicine. I recollected a woman in the Pennſylvania hoſpital, who was ſalivated by a few grains of the ſame medicine: if I remember aright it was given by Dr. Ruſh in epilepſy. Doctor James Archer, of Hartford county, informed me yeſterday, that the ſame circumſtance had happened to a patient of his, he preſcribed it for diarrhæa. I was not ſenſible of that diſagreeable ſmell which is always the effect of mercury.

I have alſo uſed this medicine with ſucceſs in alarming and obſtinate caſes of hæmoptyſis. In none of the caſes in which I uſed it, did any ill conſequences follow, except the ptyaliſm produced in the third caſe. Indeed the experience of many who have uſed this medicine in large and repeated doſes, and the many miſtakes* which have been made with it with impunity, ought to diſpel that improper timidity with which it is generally preſcribed; and which often prevents its preſcription, when it might be uſed with the moſt happy effects.

How valuable is that medicine with which the illuſtrious Ruſh, and others have cured epilepſy? Its efficacy (eſtabliſhed by experience) externally, and internally, in many forms of diſeaſe, is ſufficient to convince the moſt ſceptical that it is a very valuable medicine.

I am, with high eſteem,
Your friend and fellow ſtudent,
GEORGE E. MITCHELL.

* Vide, Medical Muſeum, Vol. I. page 101.

Favourable Reſult of the Caſe of Blindneſs detailed in the preceding Number of the Philadelphia Medical Muſeum. By the Editor.

THE very remarkable inſtance of blindneſs, cauſed by the entrance and fixation of a piece of tinſel cord in the eye, as detailed in the laſt number of the Muſeum, had ſcarcely been given to the public; when accident aſſured me of the return of ſight. Three weeks had not expired, from the time of my examining the eye, (as I uſually had done every few weeks, and) at which period viſion was completely obſtructed by the opacity of the lens or its capſule; when I received the pleaſing information from the mother of the child, that he could certainly diſtinguiſh objects. On examining the eye, the opacity had entirely diſappeared oppoſite to the pupil; but the milky appearance ſtill continued towards the circumference of the lens. He could diſtinguiſh objects, and diſcriminate accurately between them, except when they were placed diagonally to the eye, when the rays of light conſequently fell on the opaque part. I could alſo now diſtinguiſh the little figure formed of myſelf at the bottom of the eye, when looking into it;—and viſion has daily appeared to improve. The opacity continues to diminiſh, and I can have little doubt, that a ſhort time will entirely diſſipate it. The ſlight irregularity of the iris is the ſole perceptible defect, and that is evident only upon cloſe examination. This wonderful recovery from blindneſs, after four months complete privation of ſight, ſo totally unexpected to myſelf, cannot but prove pleaſing to thoſe who have peruſed the caſe, as it affords a proof of the ſalutary efforts of the animal economy, when aided by youth and a good conſtitution.

Philadelphia, Feb. 20th, 1806.

Observations on Impregnation. By Dr. PEACHEY HARRISON, *in a Letter to the Editor.**

SIR,

THE following obſervations on impregnation, were excited by the peruſal of an Eſſay upon ſuperfœtation, by Dr. William Dewees, in the Philadelphia Medical Muſeum. If they ſhall be deemed deſerving of a place in that excellent publication, I ſhall regard it as an expreſſion of public approbation in favour of talents which have been aſſiduouſly, though perhaps not ſucceſsfully cultivated; and which approbation, I now, for the firſt time, with trembling diffidence, ſolicit.

I am well aware, that the ſubject is ſurrounded with difficulties, but I am inclined to believe, that truth, on this ſubject, is not leſs ſuſceptible of diſcovery, than on various other phyſiological ſubjects, which, at this time, are quite familiar to phyſiologiſts; and I do not doubt, that, if nature were interrogated, with regard to this ſubject, with the firmneſs, the zeal and the patience, which have attended the inquiries of medical philoſophers into other abſtruſe ſubjects of phyſiology, ſhe would pronounce the oracles to the complete reward of the labourer. I have purſued the coy *maid* into ſome of her receſſes, and have endeavoured to extort from her ſome of the oracles; and I flatter myſelf not altogether without ſucceſs. My inquiries, however, have led me to concluſions adverſe to thoſe which Doctor Dewees has endeavoured to eſtabliſh in his Eſſay upon ſuperfœtation; and I deem it a ſervice due to the cultivators of phyſiology to make known thoſe opinions, which have been deduced, not from uncertain conjectures, but from reſponſes, rendered by interrogated nature.

* This communication has neither date nor place of abode; which leads the Editor, again to requeſt the authors, of papers tranſmitted to him, to be particular on this point; as well as in writing diſtinctly their names, which are ſometimes obſcure.

That there is a ſpecific ſenſibility reſident in the female genital ſyſtem will not be queſtioned, and any attempts to prove it would therefore be deemed ſuperfluous. The firſt inquiry, then, which naturally ariſes, and to which our attention will, in the firſt place be directed, is, where this ſenſibility, which I ſhall call venereal, reſides? It is anſwered, in the os tincæ chiefly, but alſo in the uterus itſelf, in the fallopian tubes, and perhaps, in the ovaria. I am inclined to think, that the ovaria poſſeſs a ſhare of venereal ſenſibility; becauſe, as venereal deſire is firſt awakened in males by the ſtimulus of the ſemen, ſo it is probable it is firſt aroufed in females by one or more ovula acquiring maturity: but where does the ſtimulus of a mature ovulum firſt exert itſelf? In the uterus, whereby the catamenia are excited and eſtabliſhed. Does not this ſerve to ſhew a connection between the ovaria and the uterus by a common ſenſibility?

That the venereal ſenſibility reſides in the os tincæ, &c. I infer from the ſtructure of the parts, and eſpecially from the projection of the collum uteri into the vagina, where it will of neceſſity, in the ſexual intercourſe, receive irritation from the ſoft and velvet-like head of the penis, well calculated to produce what I have called the venereal orgaſm; which conſiſts in a certain excitement of the uterine ſyſtem, accompanied with exquiſite ſenſations, ſimilar to thoſe which take place in the male, at the time of the ejection of the ſemen, and, with an unknown deſire to receive the ſeminal ſtimulus. But that the venereal ſenſibility is ſeated in the parts I have alleged, is eſtabliſhed beyond all doubt, by the fact, that the os tincæ is actually the ſeat of pleaſure in females in the venereal congreſs. Whether this fact is known to phyſiologiſts in general, I have not been able to aſcertain; but I am inclined to think it is not; otherwiſe their theoriſings on impregnation would have been more conformable to the natural ſuggeſtions of this fact; and particularly, they would not have ſuppoſed an ejecting power in the penis ſufficient to throw the ſemen into the uterus: and this involves

another abſurdity, viz. that the mouth and neck of the womb muſt open at the ſame time, to make way for the ſemen to be injected. It ſeems to us, if this fact, and another which we ſhall preſently ſtate, had been known to Doctor Dewees, he would not have adopted the hypotheſis which he labours ſo ſtrenuouſly to maintain.

The other fact which I am about to ſtate, and which I have hinted at above, is, that ſometimes (and this will happen more or leſs frequently, cæteris paribus, as the venereal ſenſibility is more or leſs accumulated) during the venereal congreſs, the os tincæ, the uterus and its appendages take on actions calculated to ſeize and to convey the ſeminal ſtimulus to the place of its deſtination.

The following combinations of cauſes and effects will ſerve to convey a clear conception of the manner, in which we ſuppoſe impregnation is effected.

Irritation applied by the glans penis to the os tincæ, well prepared to receive this irritation by its projection into the vagina, and by its extreme ſenſibility, is the immediate cauſe of the venereal orgaſm, or that unknown deſire which the female ſometimes feels, in coition, for the ſeminal ſtimulus; and ſecondly, that an abſorption of the fecundating fluid, when applied to the os tincæ during the orgaſm, is the proximate effect thereof; and in the third place, that the tranſmiſſion of the ſemen to the ovaria, by the proper action of the uterine ſyſtem, is as naturally the conſequence of abſorption, as deglutition is of agreeable aliment taken into the pharynx. And laſtly, that impregnation is the final cauſe of the ſexual intercourſe, and of the pleaſures with which it is accompanied.

It clearly follows from what has been ſtated above, that impregnation will never take place unleſs the venereal orgaſm has been excited; and it is equally plain, that it will not happen un-

leſs the ſemen is brought in contact with the os tincæ during the venereal orgaſm; and it follows with equal clearneſs, that an appoſition of the urethra to the os tincæ, at the ſame time will be important, if not indiſpenſable; not indeed for the purpoſe of the injection of the ſemen into the uterus, but that the ſeminal ſtimulus be applied to the os tincæ at the moment when it is prepared to abſorb and convey it to the ovaria.

That an appoſition may take place, appears to me entirely probable, from the phenomena which very generally occur in a ſexual intercourſe, in which the venereal orgaſm is awakened; among which are the following: the cervix uteri becomes turgid, the ligamenta rotunda contract, the uterus is depreſſed in the pelvis, and the os tincæ is brought nearer to the orificium externum, and aſſumes a direction favourable to an appoſition; and agreeably to theſe views we might eaſily obviate the objections derived from a penis unuſually ſhort, and from a partial imperviouſneſs of the vagina; but we will not purſue this part of the ſubject any farther.

We have ſeen, that the objection of Doctor Dewees againſt impregnation through the route of the uterus, taken from the conſideration of the inability of the penis to inject the ſemen into the uterus, is without foundation; and that, derived from the fallopian tubes being filled with a viſcid mucus, together with the viſcidity of the ſemen, appears to us altogether as groundleſs: but a more ſerious objection urged by the Doctor, is, that our hypotheſis ſuppoſes two actions in the fallopian tubes, diametrically oppoſite to each other; one by which the ſemen is conveyed to the ovaria, and the other by which the ovulum or ovula are conveyed from the ovaria to the uterus, which he aſſerts to be abſurd, and unſupported by any analogy with which we are acquainted, in the human body. Am I miſtaken when I think I perceive an analogy between theſe actions of the genital ſyſtem and thoſe which occur in the ſtomach and eſophagus in the acts of vomiting and ſwallowing; in the inteſtinal abſorbents,

in the acts of drinking up the bile and disgorging it again in diarrhœas and during the operations of active cathartics? And may we not as well admit a retrograde motion in the fallopian tubes, as of the biliary ducts according to the opinion of Doctor Cullen; or of the absorbents of the urinary bladder and others agreeably to the notion of Doctor Darwin? And is it not a well established law of the animal economy, that different and even opposite actions are produced by different stimuli, or by different degrees of the same stimulus? What hinders then, but the fallopian tubes may be excited into a retrograde motion, by the specific stimulus of the newly vivified ovula?

But how is superfœtation to be accounted for, according to our hypothesis? I am not entirely certain it ever does happen. There is still, in our opinion, a possibility of mistake in the first case detailed by the Doctor. The smallest fœtus may possibly have been coeval in its existence with the largest, and its growth may have been retarded by some unknown cause. In the second case, the girl may have admitted the embraces of the white and black man within a short distance of time of each other: upon this supposition it is possible to conceive, that each embrace proved prolific, and indeed this exposition seems to me quite admissible. But suppose superfœtation may happen, we are then only prepared to offer some conjectures as to the manner in which it may happen; and we would ask, why it may not take place as we have endeavoured to evince other impregnations do? This, it will be objected, is impossible, the passage from the vagina into the uterus being obliterated after impregnation; but does it appear that this is the fact? Does not the smallest quantity of blood effused into the uterus during gestation easily find its way into the vagina? The fact is, the passage is only obstructed with a viscid mucus, which might, it is conceived, be diluted in time of coition, so as to admit the passage of the semen into the uterus, whence it may be conveyed to the ovaria by the fallopian tubes, as in other fœcundations; for it

will not be asserted, that the openings of these tubes in the uterus are always obstructed by the placenta.

Thus we conceive the main difficulty to superfœtation, (supposing this ever to happen) through the route of the uterus, is obviated. Upon the whole we are fully persuaded, that the theory of Doctor Dewees, however ingenious, is entirely insufficient to explain the phenomena of impregnation; nor can we perceive the necessity of resorting to it, in order to account for superfœtation, were we persuaded that this may happen: but to this, it seems to us, the all-wise Creator has opposed at least the following obstacles, viz. a diminished venereal sensibility, and a retraction of the cervix uteri from the vagina in the progress of gestation; and hence it seems highly improbable that, during this period, the venereal orgasm will ever take place; and agreeably to the opinions we have endeavoured to establish, superfœtation will in all probability never happen.

——Si quid novisti rectius istis,
Candidus, imperti: si non, his utere mecum.

PEACHEY HARRISON.

DR. JOHN REDMAN COXE.

Observations on the indigenous Medicinal Plants of America; and on the Cultivation of those of foreign Growth. By Dr. TOBIAS WATKINS.

Havre-de-Grace, December 16th, 1805.

DEAR SIR,

ABOUT two years ago I commenced a series of experiments upon the nature of some of our indigenous plants, and the easiest means of adapting the cultivation of those of foreign growth to the climate of the United States; and I was much pleased to find, in the last number of your Museum, a communi-

cation on the ſame ſubject from my eſteemed friend Dr. Meaſe. As my principal object is to excite others to ſimilar experiments, if you think the ſubject worth notice, you will oblige me by giving a place in your Muſeum to the following obſervations on the nature and cultivation of medicinal plants in the United States.

From the very birth of our country to the preſent day, we have been indebted to different European nations for the reſult of their labours and ſtudies, in thoſe arts and ſciences which have contributed ſo largely to our happineſs and well-being. Some few Americans however have boldly ſtepped forward to aſſert our natural independence, who by their unwearied aſſiduity and indefatigable labours in the field of ſcience, have raiſed an harveſt ſufficiently abundant to exerciſe the induſtry of an enterpriſing poſterity; and in no ſcience have we been bleſſed with more originality than in that of medicine, and its different branches. Natural hiſtory has, until lately, formed but a ſmall part of the ſtudy of Americans; and the reſearches of thoſe few who did engage in it, were made, it would appear, rather with a view to advance their own fame than to benefit others; hence there has been but a trifling addition made to the Materia Medica, from the United States. Botanical gardens have been inſtituted, which will no doubt tend to facilitate the ſtudy of that pleaſing and inſtructive ſcience; but hitherto, I believe, that few experiments have been made to aſcertain the relative qualities of their produce with thoſe from foreign countries, and we continue our dependance on theſe for a ſupply. It is well known that many medicines, from long keeping, loſe virtues which in a recent ſtate they poſſeſſed in an eminent degree, and the great demand for particular medicines, (more eſpecially the Peruvian bark) which have been ſuppoſed to thrive only in particular countries, is certainly frequently the cauſe of adulterations which have ultimately diſappointed our high-raiſed expectations of their ſucceſs. It is my intention, as far as my experiments have carried me, to point out the

will not be aſſerted, that the openings of theſe tubes in the uterus are always obſtructed by the placenta.

Thus we conceive the main difficulty to ſuperfœtation, (ſuppoſing this ever to happen) through the route of the uterus, is obviated. Upon the whole we are fully perſuaded, that the theory of Doctor Dewees, however ingenious, is entirely inſufficient to explain the phenomena of impregnation; nor can we perceive the neceſſity of reſorting to it, in order to account for ſuperfœtation, were we perſuaded that this may happen: but to this, it ſeems to us, the all-wiſe Creator has oppoſed at leaſt the following obſtacles, viz. a diminiſhed venereal ſenſibility, and a retraction of the cervix uteri from the vagina in the progreſs of geſtation; and hence it ſeems highly improbable that, during this period, the venereal orgaſm will ever take place; and agreeably to the opinions we have endeavoured to eſtabliſh, ſuperfœtation will in all probability never happen.

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eaſieſt means by which ſome of our indigenous medicinal plants may be cultivated, and at the ſame time compare their virtues with thoſe of the ſame claſs imported. If what I have done, or can ſay on the ſubject, ſhould incite a ſingle attempt towards a proſecution of the propoſed plan of raiſing our own medicines, I ſhall certainly feel far overpaid, in the conviction that a fair and candid trial, with induſtry and perſeverance, will fully demonſtrate its general utility as well as economy.

It will be ſeen alſo in the ſequel of theſe obſervations, that ſome of our moſt valuable exotics may be cultivated here at a leſs expenſe than they can be imported.

1ſt. White poppy.* Papaver ſomniferum of Linnæus. As this plant has found a place in almoſt every garden for the beauty of its flower, it will be needleſs to give any deſcription or make any remarks on its cultivation; I ſhall therefore only relate the method which I took to procure the juice, and ſome experiments on its ſtrength and virtue. A day or two after the flowers had fully blown, with a ſharp knife I made from three to five inciſions longitudinally on the capſules or heads of the plant, at ſun-riſe, taking care not to carry the inciſion ſo deep as to wound the ſeed. The juice would continue to exude from theſe inciſions until ſun-ſet, when it was carefully collected on a clean glaſs and expoſed to the next day's ſun, by which time it would become ſufficiently inſpiſſated to form pills. In taſte and ſmell it exactly reſembles the common Turkey opium, but the colour is conſiderably darker.

In a violent fit of the colic in which I ſuffered the moſt excruciating pain, I took one grain of the juice (my uſual doſe of opium) which produced no effect; in twenty minutes I repeated the ſame doſe, and in leſs than fifteen minutes afterwards the pain was entirely deſtroyed, and I felt ſomewhat

* There appears to me to be no difference in the juice of ſeveral other ſpecies of the poppy.

drowsy and stupid; my pulse, during this time, suffered no variation; but I continued to experience the effect of the opium for three hours; having no return of pain during all that time. As this proved to me that the poppy juice might be given, at least without any bad consequences, I felt no hesitation in trying it the next opportunity, which occurred a few days after, in a case of obstinate and troublesome diarrhœa in an adult. After the operation of a dose of ol. ricin. I directed the patient to take one grain of the poppy juice every two hours, until the frequency of his motions should be abated: after the third dose, my patient fell into a profound sleep, which lasted uninterrupted, for five or six hours; when he awoke and continued perfectly free from his complaint. In a third case of violent toothache, one grain placed in the decayed tooth, procured relief in ten minutes. For six months past I have occasionally used it in those cases where opium was necessary, with precisely the same effects; the only difference I have experienced is, that the Turkey opium is about one-sixth stronger. Common rum extracts the whole virtue of the juice, leaving scarcely any residuum.

2d. Palma Christi. (Ricinus communis,) Lin. This plant, which is a native of the West Indies, requires particular attention to bring it to perfection in this climate: unless planted at the first opening of spring, the nuts cannot have time to ripen before frost. The method which I have found to succeed best, is to plant the seed in November, in pots or boxes, and by keeping them in a house during the winter, they begin to germinate about the middle of March; and by the first of May, when the earth has become thoroughly thawed, the young plants may be removed into the garden, and transplanted into rich mould or ground highly manured; care should be taken to water them well for some days, after which nothing more is necessary than to keep the ground about them well worked, and free from weeds; with this attention, the plants will grow to the height of from five to eight feet with very luxuriant branches. The

flowers make their appearance generally about the firſt of July, and continue in ſucceſſive crops until entirely deſtroyed by the froſt. The nuts, which are contained in a beautiful green bur, may be gathered as ſoon as the external covering begins to open a little and loſe its green colour; and care being taken to collect them as faſt as they ripen, from two to three pints may be gathered from one plant before the middle of October. The method which I took to obtain the oil was as follows. Into a clean iron pot capable of containing two gallons, I put one gallon and a half of clean ſpring water, into which five pints of the ſeed (freed from the thin brittle ſhell which envelops them) were thrown. The pot was then covered and placed on a ſlow fire; as ſoon as it began to boil, it was removed and the oil carefully ſkimmed off, yielding fourteen ounces. The pot was then replaced on the fire and ſuffered to boil as long as any oil aroſe. The product of this laſt boiling was one pint; thicker, and more of an orange colour than the firſt, and of a diſagreeable empyreumatic odour and taſte. The firſt fourteen ounces were of a light yellow colour, about the conſiſtence of pure olive oil, without taſte or ſmell. Of this, one ounce would generally operate very briſkly without cauſing the leaſt nauſea or griping, and as I have always found it more certain in its operation and much leſs naufeous than the expreſſed oil which comes to us from the Weſt Indies, I have univerſally given it the preference when oil was indicated.

3d. Mallow. Malva Sylveſtris. L. This plant, when cultivated, grows to the height of ſix feet; the leaves very broad and beautifully fringed and ſcolloped, with a ſmall delicate purple flower, which appears in June and July. The leaves are the only part which I have uſed, and theſe have long ſtood high in the eſtimation of the old women, in all caſes of urinary obſtructions. They appear to have a peculiar action on the kidneys; and in ſeveral caſes of obſtructed urine, I have ſeen an infuſion of them, given in doſes of a tea-cupful, at ſhort intervals, produce the moſt ſpeedy and happy effects; in gonorrhœa,

this medicine is of wonderful ſervice in allaying the acrimony of the urine. I have directed it likewiſe with conſiderable benefit in ſome caſes of diarrhœa where the ſtools were acrimonious; three ounces of the pure leaves infuſed in a pint of boiling water will purge gently without griping. For keeping, the leaves ſhould be gathered as ſoon as the flowers diſappear, and dried in a houſe; when expoſed to the ſun they loſe that mucilaginous quality for which they are ſerviceable.

4th. Pennyroyal, Mentha, Pulegium. L. This plant generally grows wild in great abundance in old uncultivated fields, where it may eaſily be diſcovered by its ſtrong, penetrating, ſomewhat aromatic ſmell. There is no eſſential difference in the qualities of the plant, when cultivated, except that it acquires a more penetrating ſmell. The pulegium, has long been deſervedly celebrated as an emmenagogue, and indeed in no inſtance have I ever ſeen it fail to produce a flow of the menſes, and after every other means had been tried in vain. Phyſicians are too apt to deſpiſe ſuch ſimple remedies as are in the hands of every body, and thus are often baffled in their endeavours to relieve ſome diſeaſes which the moſt ignorant old woman can effectually remove; from this error alone, I am convinced that ſome of our moſt powerful remedies have no place in the ſhops. The uſual manner of uſing the pulegium, is infuſion of the whole plant; but I have given the powder of the dried plant to the extent of half a drachm for a doſe with the ſame effect: rectified ſpirit makes an agreeable tincture poſſeſſing the whole virtues of the plant.*

* So powerful and immediate is the action of this plant on the uterus, that ſeveral caſes of abortion are on record, produced by its odour—One inſtance, I have myſelf known, during the laſt ſummer, in a woman of delicate conſtitution, in the fourth month of her pregnancy.

Time will not permit me to give you a longer list at present; but it is my intention, if you should think that any benefit will result to the science from the pursuit of this subject, to continue my communications as often as I have leisure. With sincere wishes for the success of your labours,

I am, dear sir,

Very respectfully,

Your obedient servant,

T. WATKINS.

Dr. John Redman Coxe.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

PRIZE MEDALS,

Offered by the HUMANE SOCIETY *of Philadelphia.*

THE Society have obſerved, with gratitude, and admiration, the labours of the many learned and ingenious benefactors of mankind, who have advanced to an high degree of improvement, the means to be employed in reſtoring to life thoſe who have been apparently deprived thereof. But they have at the ſame time to regret, that notwithſtanding much good hath been done, yet theſe means very often fail of ſucceſs. In order to excite public attention towards the further improvement of ſo important a part of medical ſcience, the ſociety is induced to offer;

For the beſt diſſertation on the means of reſtoring to life, perſons apparently dead from drowning, and more effectual than any yet in uſe, a GOLD MEDAL, *value* FIFTY DOLLARS.

For the ſecond beſt, a SILVER MEDAL, *value* TWENTY-FIVE DOLLARS.

The diſſertations to be ſent to the Secretary of the Society (poſt-paid) by the firſt day of January 1808.

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They may be written in the Engliſh, French or Latin language, to be accompanied with a ſealed paper, containing the author's name and place of reſidence; which is not to be opened, unleſs the prize is decreed.

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By order of the Managers of the Humane Society,

JOSEPH CRUKSHANK, *Preſident.*

ISAAC SNOWDEN, Jun. *Secretary.*

Philadelphia, Dec. 11*th*, 1805.

At the Anniverſary Meeting of the *Medical Society of South-Carolina*, held on Tueſday laſt, the 24th inſt. (January) the following gentlemen were elected officers for the enſuing year:

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					In.dec.	In.dec.	In.dec.	In.dec.		
1	33	10	23.0		30.22	29.65	29.90			
2	35	15	27.2		30.48	29.90	30.19		NW	Clear 4.4
January. 3	33	14	20.9	26.0	30.94	30.10	30.46	30.18	SW	Cloudy 2.3
4	41	10	27.2		30.12	29.14	29.94		NE	—
5	47	6	24.4		30.35	29.75	30.12		W	Rain, &c.
6	41	26	33.3		30.30	29.85	30.02			26
1	41	15	25.1		30.30	29.70	29.98			
2	41	20	34.2		30.45	29.80	30.11		NW	Clear 5.1
February. 3	49	24	39.9	36.8	30.40	29.50	30.92	30.37	SW	Cloudy 2.1
4	41	22	30.6		30.35	29.90	30.16		NE	—
5	51	35	42.5		30.41	30.05	30.21		W	Rain &c.
6	52	34	40.2		30.48	30.14	30.31			12
1	55	34	44.6		30.45	30.10	30.30			
2	68	42	53.6		30.36	30.10	30.26		NE	Clear 4.1
March. 3	55	27	40.4	49.0	30.65	29.92	30.25	30.33	SW	Cloudy 2.9
4	73	40	54.2		30.48	30.01	30.27		NW	—
5	63	35	45.7		30.35	29.90	30.30		SE	Rain, &c.
6	64	40	47.6		30.51	30.08	30.33			23
1	81	48	57.4		30.45	30.12	30.28			
2	64	46	51.9		29.95	29.70	29.80		NW	Clear 5.9
April. 3	74	45	60.3	58.3	30.05	29.75	29.94	29.83	SW	Cloudy 2.4
4	77	54	63.4		30.10	29.70	29.26		W	—
5	67	51	58.0		30.21	29.60	29.26			Rain, &c.
6	71	52	57.6		30.20	29.85	29.97			7
1	81	52	65.8		30.29	29.88	30.05			
2	71	54	61.6		30.44	29.90	30.17		SW	Clear 6.0
May. 3	74	55	65.7	65.5	30.28	29.68	29.98	30.21	NW	Cloudy 2.1
4	73	53	61.2		30.08	29.85	29.99		SE	—
5	77	58	66.5		30.20	29.96	30.09		NE	Rain, &c.
6	79	57	68.4		30.18	29.90	30.63			12
1	84	58	71.8		30.19	29.83	29.97			
2	80	61	66.2		30.16	29.65	29.90			Clear 6.7
June. 3	85	60	72.8	73.5	30.34	30.05	30.28	30.07	SE	Cloudy 1.9
4	86	74	77.6		30.26	30.10	30.23		SW	—
5	88	71	77.0		30.20	29.98	30.12		NW	Rain, &c.
6	84	68	75.7		30.10	29.85	29.96			4

Wind SW 330
NW 337
NE 142
SE 178
W 72
Various 98

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					In.dec.	In.dec.	In.dec.	In.dec.		
1	33	10	23.0		30.22	29.65	29.90			
2	35	15	27.2		30.48	29.90	30.19		NW	Clear 4.4
3	33	14	20.9	26.0	30.94	30.10	30.46	30.18	SW	Cloudy 2.3
4	41	10	27.2		30.12	29.14	29.94		NE	—
5	47	6	24.4		30.35	29.75	30.12		W	Rain, &c.
6	41	26	33.3		30.30	29.85	30.02			26
1	41	15	25.1		30.30	29.70	29.98			
2	41	20	34.2		30.45	29.80	30.11		NW	Clear 5.1
3	49	24	39.9	36.8	30.40	29.50	30.92	30.37	SW	Cloudy 2.1
4	41	22	30.6		30.35	29.90	30.16		NE	—
5	51	35	42.5		30.41	30.05	30.21		W	Rain &c.
6	52	34	40.2		30.48	30.14	30.31			12
1	55	34	44.6		30.45	30.10	30.30			
2	68	42	53.6		30.36	30.10	30.26		NE	Clear 4.1
3	55	27	40.4	49.0	30.65	29.92	30.25	30.33	SW	Cloudy 2.9
4	73	40	54.2		30.48	30.01	30.27		NW	—
5	63	35	45.7		30.35	29.90	30.30		SE	Rain, &c.
6	64	40	47.6		30.31	30.08	30.33			23
1	68	48	57.4		30.45	30.12	30.28			
2	64	46	51.9		29.95	29.70	29.80		NW	Clear 5.9
3	74	45	60.3	58.3	30.05	29.75	29.94	29.83	SW	Cloudy 2.4
4	77	54	63.4		30.10	29.70	29.26		W	—
5	67	51	58.0		30.21	29.60	29.26			Rain, &c.
6	71	52	57.6		30.20	29.85	29.97			7
1	81	52	65.8		30.29	29.88	30.05			
2	71	54	61.6		30.44	29.90	30.17		SW	Clear 6.c
3	74	55	65.7		30.28	29.68	29.98		NW	Cloudy 2.1
4	73	53	61.2	65.5	30.08	29.85	29.99	30.21	SE	—
5	77	58	66.5		30.20	29.96	30.09		NE	Rain, &c.
6	79	57	68.4		30.18	29.90	30.63			12
1	84	58	71.8		30.19	29.83	29.97			
2	80	61	66.2		30.16	29.65	29.90			Clear 6.7
3	85	60	72.8	73.5	30.34	30.05	30.28	30.07	SE	Cloudy 1.9
4	86	74	77.6		30.26	30.10	30.23		SW	—
5	88	71	77.0		30.20	29.98	30.12		NW	Rain, &c.
6	84	66	75.7		30.10	29.85	29.96			4

Wind SW 339
NW 337
NE 142
SE 122
W 72
Various 98

Abstract of Meteorological Observations for 1805.

Months in divisions.	THERMOMETER. Highest.	Lowest.	Mean of divisions.	Mean of month.	BAROMETER. Highest.	Least.	Mean of div.	Mean of month	Prevailing winds.	Weather.
					In. dec.	In. dec.	In. dec.	In. dec.		
1	91	69	78.4		30.45	30.16	30.31		NW	Clear 7.5
2	93	78	85.6		30.34	30.16	30.25		SW	Cloudy 1.4
3	91	75	81.4	81.3	30.38	30.12	30.25	30.23	SE	—
4	90	75	81.5		30.30	30.00	30.16		NE	Rain, &c.
5	88	69	84.0		30.44	30.08	30.27			4
6	87	65	76.8		30.22	30.00	30.13			
1	86	72	78.2		30.28	29.95	30.06			Clear 5.8
2	86	72	78.2		30.41	30.32	30.35		SW	Cloudy 2.9
3	91	74	77.2		30.31	30.08	30.19		SE	—
4	88	72	80.2	78.8	30.33	30.05	30.2[illegible]	30.21	NW	Rain, &c.
5	92	75	82.5		30.30	30.10	30.1[illegible]			6
6	88	68	76.5		30.42	30.12	30.26			
1	88	63	72.6		30.50	30.15	30.31			Clear 5.3
2	88	71	77.3		30.49	30.30	30.3[illegible]		SW	Cloudy 1.5
3	86	69	75.3		30.30	30.12	30.19		NE	—
4	86	73	78.0	70.6	30.37	30.25	30.31	30.29	NW	Rain, &c.
5	82	60	68.1		30.40	30.08	30.21		SE	13
6	62	48	52.4		30.42	30.30	30.34			
1	63	47	56.0		30.32	29.89	30.14			Clear 6.1
2	65	44	54.2		30.[illegible]1	30.10	30.27			Cloudy 2.0
3	76	48	62.7		30.30	29.94	30.14		NW	—
4	72	44	57.6	54.1	30.40	30.00	30.17	30.18	SW	Rain, &c.
5	56	37	49.1		30.15	29.75	29.92		NE	12
6	58	32	45.4		30.67	30.30	30.48			
1	64	45	52.0		30.35	30.01	30.27			Clear 5.7
2	55	40	48.6		30.59	30.15	30.37			Cloudy 2.0
3	65	34	48.0		30.55	30.10	30.33		NW	—
4	48	39	42.5	46.9	30.20	29.90	30.08	30.15	SW	Rain, &c.
5	48	36	41.1		30.33	29.98	30.11			13
6	65	34	49.5		30.12	29.62	29.85			
1	57	32	47.0		30.52	30.12	30.36			Clear 7.5
2	58	36	47.3		30.39	29.97	30.19		NW	Cloudy 1.0
3	58	33	48.0		30.51	29.98	30.20		SW	—
4	59	32	45.4	45.8	30.39	29.98	30.24	30.19	W	Rain, &c.
5	55	34	47.0		30.45	29.55	30.10			8
6	54	27	40.2		30.87	29.70	30.08			

Range of thermometer during the year,	Degrees	87.
Mean height of thermometer for the year,		57.2
Greatest variation of thermometer in 24 hours,		28.
Range of barometer during the year,	Inches	1.71
Mean height of barometer for the year,		30.18
Greatest variation of barometer in 24 hours,		0.63
Rain, &c. during the year,		42.
Greatest quantity in one month (January,)		9.
Least quantity in one month (July,)		[illegible]

THERMOMETERS.

Fahrenheit's thermometer is generally uſed in this country. In it the range between the freezing and boiling points of water is divided into 180 degrees; and as the greateſt poſſible degree of cold was ſuppoſed to be that produced by mixing ſnow and muriate of ſoda, it was made the zero, and the freezing point became 32°, and the boiling point 212°.*

The Centigrade thermometer of France, places the zero at the freezing point, and divides the range between it and the boiling point into 100°. This has long been uſed in Sweden under the title of Celſius's thermometer.

Reaumur's thermometer, which was formerly uſed in France, divides the ſpace between the freezing and boiling of water into 80° and places the zero at the freezing point.

Wedgewood's pyrometer is only intended to meaſure very high temperatures. Its zero correſponds with 1077° of Fahrenheit's, and each degree of Wedgewood is equal to 130 of Fahrenheit.

De Liſle's thermometer is uſed in Ruſſia. The graduation begins at the boiling point and increaſes towards the freezing point. The boiling point is marked 0, and the freezing point 150.

Therefore 180° F.= 100° C.=80° R.= 150 D.=$\frac{18}{13}$W.

Or to reduce centigrade degrees to thoſe of Fahrenheit, multiply by 9 and divide by 5, and to the quotient add 32, that is, $\frac{9\,C}{5}+32=F$.

To reduce Reaumur's to Fahrenheit's, we have the following formula, $\frac{9\,R}{4}+32=F$.

To reduce De Liſle's degrees under the boiling point, we have $F=212-\frac{6\,D}{5}$ to reduce thoſe above the boiling point $F=212+\frac{6\,D}{5}$

To reduce Wedgewood's degrees to thoſe of Fahrenheit, we have 130 W + 1077 = F, or inverſely,

$\frac{5\,F-160}{9}=C.$ $\quad$ $\frac{4\,F-128}{9}=R.$ $\quad$ $\frac{F-1077}{13}=W.$

$\frac{1060-5\,F}{6}=D.$ $\quad$ $\frac{5\,F-1060}{6}=-D.$

* The freezing point would appear to be the moſt natural commencement of the ſcale or Zero, and here we find both Reaumur's and the Centigrade Thermometer coincide. The preſent range of 180° between the freezing and boiling point, is a very convenient one for the regular diviſion of the ſcale, and it will alſo facilitate the reduction of the various ſcales to each other. I have ſeveral times adapted this ſcale to thermometer tubes, and cannot but wiſh it was in general uſe. I ſhall take the liberty to call it the American Thermometer. *Editor.*

TABLE *of the Degrees of different Thermometers, omitting Fractions, at which ſome remarkable Chemical Phenomena occur.*

REA.	CENT.	FAHR.	AMER.	
54	68	90	122	Cold produced by Mr. Walker.
44	55	66	98	Nitric acid freezes, Fourcroy.
36	44	50	82	Cold obſerved at Hudſon's Bay, Mr M'Nab.
35	43	46	78	Ether freezes.
34	42	45	77	Ammonia exiſts in a liquid form.
32	39	39	71	Mercury freezes.
30	37	36	68	Sulphuric acid freezes, (Thomſon).
28	35	31	63	Sulphurous acid liquid, (Monge).
24	30	23	55	Cold obſerved at Glaſgow on the ſurface of ſnow, 1780.
23	30	22	54	Acetous acid freezes.
20	25	14	46	Cold obſerved at Glaſgow, 1780.
19	24	11	43	Two parts of alcohol and one of water freeze.
17	14	7	39	Brandy freezes.
14	18	0	32	Cold, produced by mixing equal parts of ſnow and muriate of ſoda.
7	9	16	16	Oil of turpentine freezes. Margueron did not freeze at—18 Morelli.
5	6	20	12	Strong wines freeze.
4	5	23	9	Fluoric acid freezes, (Prieſtly). Oil of bergamot and cinnamon freezes, (Marg.)
3	4	25	7	Human blood freezes.
2	2.5	28	4	Vinegar freezes.
1	1.25	30	2	Milk freezes.
0	0	32	0	Oxymuriatic acid melts, (Thomſon). Water freezes.
2	2.5	36	4	Olive oil freezes.
4	5	40	8	Oxymuriatic acid boils, (Thomſon).—Equal parts of phoſphorus and ſulphur melt, (Pelletier).
5	6	43	11	Phoſphorus burns ſlowly.
6		45	13	Sulphuric acid, Sp. gr. 1.78, freezes, (Keir).
10	12	55	23	to 66 putrid fermentation, (Fourcroy).
12	15	59	27	Vinous fermentation begins, (Fourc).

Re.	Cent.	Fah.	ame.	
14	17	64	32	Oil of anise freezes,
15	18	66	34	to 133, F. Animal putrefaction, 70 to panary fermentation.
16	20	68	36	Camphor evaporates, (Fourcroy).
19	24	75	43	Summer heat at Edinburgh.
20	25	77	45	Vinous fermentation rapid, (Fourcroy). Acetous ditto begins.
21	26	80	48	Phosphorus burns in oxygen gas. 104 Goettling.
22	28	82	50	The adipocere of muscle melts.
25	31	88	56	Acetous fermentation ceases, (Fourc.) Phosphorus is ductile. F.
28	37	96	64	to 100, animal heat.
		97	65	Axunge melts, (Nicholson).
29	36	98	66	Ether boils.
30	37	99	67	Phosphorus melts, (Pelletier).
32	40	104	72	Resin of bile melts.
33	41	107	75	Feverish heat.
34	42	109	77	Myrtle wax melts (Cadet).
36	45	112	80	Spermaceti melts (Bostock).
40	50	122	90	Phosphorus burns vividly, (Fourcroy). 148, (Thomson).
42	53	127	95	Tallow melts, (Nicholson).
44	54	130	98	Ammonia is separated from water.
48	60	140	108	Ammonia boils, (Dalton).
49	61	142	110	Bees wax melts, (Irvine).
50	63	145	113	Camphor sublimes, (Venturi). Ambergris melts, (La Grange).
55	79	155	123	Bleached wax melts, (Nicholson).
59	74	165	133	Albumen coagulates. 156 (Black).
61	77	170	138	Sulphur evaporates, (Kirwan).
64	80	176	144	Alcohol boils. 174 (Black).
80	100	212	180	Water and volatile oils boil. Bismuth 5 parts, tin 3, and lead 2, melt.
83	104	219	187	Phosphorus begins to distil, (Pelletier).
88	110	230	198	Muriate of lime boils, (Dalton).
89	111	232	200	Sulphur melts, Hope. (212°. Fourcroy). (185°. Kirwan.)
90	112	234	202	Adipocere of biliary calculi melts. (Fourcroy).
93	116	241	209	Nitrous acid boils.
96	120	248	&c.	Nitric acid boils.

Reau.	Cent.	Fahr.	Wed.	
112	140	283		White oxide of arsenic sublimes. Alloy of equal parts of tin and bismuth melts,
120	150	303		Sulphur burns slowly, and camphor melts, (Venturi),
134	168	334		Alloys, tin 3, and lead 2, and tin 2, bismuth 1, melt,
182	227	442		Tin melts, Crichton. (413, Irvine),
190	238	460		Tin 1, and lead 4, melt,
197	248	476		Bismuth melts, (Irvine),
225	282	540		Arsenic sublimes,
232	290	554		Phosphorus boils, (Pelletier),
233	294	560		Oil of turpentine boils,
248	310	590		Sulphuric acid boils, (Dalton), 546, Black. 540, Bergm.
252	315	600		Linseed oil boils. Sulphur sublimes, (Davy.) 570, Thomson,
258	325	612		Lead melts, Chrichton. (594, Irvine). 585, Secundat. (540, Newton),
269	335	635		Lowest ignition of iron in the dark,
278	350	660		Mercury boils, (Dalton). 644, Secundat. 600, Black,
297	371	700		Zinc melts,
315	384	750		Iron bright red in the dark,
341	427	800		Hydrogen gas burns. 1000, Thomson,
342	428	802		Charcoal burns, (Thomson),
345	432	809		Antimony melts,
380	475	884		Iron red in the twilight,
448	560	1050		Iron red hot in a common fire.
462	577	1077	1	Red heat in day light.
564	705	1300	1.7 +	Azotic gas burns.
737	986	1807	6	Enamel colours burnt.
1451	1814	2897	14	Diamond burns, 1, Sir G, M'Kenzie. 5000, Morveau,
1678	2100	3807	21	Brass melts,
2024	2530	4587	27	Copper melts,
2082	2602	4717	28	Silver melts.
2130	2700	4847	29	Settling heat of plate glass.
2313	2780	5237	32	Gold melts.

Reau.	Cent.	Fahr.	Wed.	
2880	3580	6507	40	Delft ware fired.
3750	4680	8480	57	Working heat of plate glaſs.
4450	5610	10177	70	Flint glaſs furnace.
5370	6770	12257	86	Cream coloured ſtone ware fired.
5800	7380	13297	94	Worceſter china vitrified.
6270	7850	14437	102	Stoneware fired.
6520	8150	14727	105	Chelſea china vitrified.
6925	8650	15637	112	Derby.
7025	8770	15897	114	Flint glaſs furnace greateſt heat.
7100	8880	16007	121	Bow china vitrified.
			123	Equal parts of chalk and clay melt.
7460	9320	16807	124	Plate glaſs furnace ſtrongeſt heat.
7650	9600	17327	125	Smith's forge.
7975	9850	17977	130	Cobalt melts. Caſt iron melts.
8250	10320	18627	135	Briſtol china, no vitrification at,
9131	11414	20577	150	Nickel melts. Heſſian crucible melted.
9325	11680	21097	154	Soft iron nails melted with the crucible.
9602	12001	21637	158	Iron melts.
9708	12136	21877	160	Manganeſe melts. Air furnace.
10286	12857	23177	170+	Platinum, tungſten, molybdenum, uranium and titanium, melt.
11100	13900	25127	185	Greateſt heat obſerved.

N. B. As many of theſe higher numbers were calculated from Wedgewood's, by the ſliding rule, the two or three firſt figures only can be depended upon as correct. They will be found however ſufficiently accurate for moſt purpoſes.

Table of Freezing Mixtures.

During the ſolution of many ſaline bodies, a very conſiderable reduction of temperature takes place. We ſhall extract from Mr. Walker's paper a few of the moſt convenient mixtures employed for this purpoſe.

A mixture of		*reduces the temperature.*
Muriate of ammonia,	5 parts.	from 50° to 10°.
Nitrate of potaſs,	5	
Water,	16	
Sulphate of ſoda,	8	from 50° to 0°.
Muriatic acid,	5	
Snow	1	from 32° to 0°.
Muriate of ſoda,	1	
Snow,	2	from 0° to—5°
Muriate of ſoda,	1	
Snow,	1	from—5° to—18°.
Muriate of ſoda,	5	
Muriate of ammonia, and Nitrate of potaſs,	5	
Snow,	12	from—18° to—25°.
Muriate of ſoda,	5	
Nitrate of ammonia,	5	
Snow,	1	from 20° to—60°,
Diluted Sulphuric acid,	1	
Snow,	2	from 32° to—50°.
Muriate of lime,	3	
Snow,	1	from—40° to—73°.
Muriate of lime,	3	
Snow,	8	from—68° to—91°.
Diluted ſulphuric acid,	10	

The ſalts ought to be recently cryſtallized, and reduced to a very fine powder, and the mixture ſhould be made as quickly as poſſible. To produce a very great degree of cold, the materials muſt be previouſly cooled down by means of other mixtures.

The preceding tables form a part of the late improved edition of the Edinburgh Diſpenſatory, edited by Dr. Duncan, jun; to which is added, a ſcale for a thermometer, which is perhaps, the moſt conveniently divided of any other; and which the Editor of the Philadelphia Medical Muſeum preſumes to deſignate by the title of the American Thermometer. Theſe tables as here introduced, form a portion of a new Diſpenſatory, now publiſhing here, and which will appear in a few weeks. This, though founded on the baſis of the Edinburgh Diſpenſatory, yet as it is entirely on a new plan, the American Editor has ventured to call the American Diſpenſatory. A work which has never yet made its appearance here: but the neceſſity of which has doubtleſs been experienced by every practitioner.

It has unfortunately happened that all the Diſpenſatories in common uſe in America, have the formulæ of both the London and Edinburgh Colleges, which differ in many places from each other, and in ſome inſtances ſo greatly as to be a ſource of conſiderable diſadvantage. Thus, for example, in the formation of antimonial wine, the formula of the London, is double the ſtrength of that of the Edinburgh College. This inconvenience is greatly augmented, by the addition of the Dublin Pharmacopœia, to the late edition of the Edinburgh Diſpenſatory, by Dr. Duncan. In Great Britain, this inconvenience is not perceived, becauſe England, Scotland and Ireland, are governed in their preſcriptions by the ſtandards of their reſpective colleges; but in this country, where it is optional with every apothecary to compound his medicines by either Pharmacopœia, the want of a ſtandard is peculiarly evident. It is of little conſequence which ſet of formulæ is aſſumed as a ſtandard, provided it be in general acceptance; and although ſuch a publication as is

here proposed to be given to the public, would doubtless appear better under the sanction of the College of Physicians, yet as such an event does not appear to be probable; the Editor trusts he will not have performed an useless task in thus advancing as a standard, those formulæ taken from the respective British Pharmacopœias, which appeared to him best. Under this impression, he hopes for the aid of his fellow practitioners, in the introduction of the American Dispensatory; which he is however far from considering as perfect; yet, from the preceding considerations, he is impressed with the belief, that it may be beneficial.

Although the basis of the work is the last edition of the Edinburgh Dispensatory; the arrangement is so different from that or any other Dispensatory the Editor has met with, that he apprehends it may very properly have the distinctive appellation of the American Dispensatory. Should the present form, &c. be approved by the judgment of the medical world, it will afford the highest gratification to the Editor for the trouble it has given him; and he will cheerfully endeavour from the hints which may be afforded to him, to render any subsequent edition more perfect than the present.

Memoirs of EDWARD JENNER, M. D. *From Dr.* LETTSOM'S *Oration, delivered before the Medical Society of London, on the 8th of March*, 1804.

TO give accurate delineations of living characters is peculiarly difficult. Few can bear the ſtern truth of faithful biography; and where friendſhip directs the pen, a partiality, of which the writer is, perhaps, unconſcious, ſlides into unmerited panegyric. There are, however, individuals whoſe luſtre acquires no acceſſion from the glow of public gratitude or the ardour of private veneration.—Such is our Jenner, "whom it can never be a degradation to praiſe, whom it is a degradation to praiſe without enthuſiaſm," the youngeſt ſon of the Rev. Stephen Jenner, M. A. of the Univerſity of Oxford, Rector of Rockhampton, and Vicar of Berkley, in Glouceſterſhire; at which place Dr. Jenner was born on the 17th day of May 1749.

Beſides theſe church preferments, the reſpectable parent poſſeſſed conſiderable landed property in the ſame county.

His mother was the daughter of the Rev. Henry Head, of an ancient family in Berkſhire; who likewiſe once held the living of Berkeley, and was at the ſame time a Prebendary of Briſtol.

Young Jenner loſt his father at a very early period of his life; a loſs in ſome meaſure ſupplied by the affectionate attentions of his elder brother, the Rev. John Jenner, B. D. Fellow of Magdalen College, Oxford, united with thoſe of another brother, the Rev. Henry Jenner, Domeſtic Chaplain to the Earl of Ayleſbury, and Vicar of Great Bedwin, Wilts, father

of the Rev. George Jenner, and of Henry Jenner, Surgeon, at Berkeley.

Our Jenner received his claſſical education at Cirenceſter, and his medical under Daniel Ludlow, of Sudbury, a gentleman of profeſſional eminence.

In 1770, he took up his reſidence with the late John Hunter, Eſq. of London, with whom he continued for about the ſpace of two years. This celebrated Anatomiſt purſued alſo the ſtudy of natural hiſtory, which he explained by diſſection, and publiſhed the reſult in various eſſays, in many of which the name of Jenner is reſpectfully introduced; and ſo highly had he eſtimated the acquirements of his pupil, as to propoſe to him a liberal engagement to join him in delivering lectures upon natural hiſtory, which Hunter then had in contemplation.

At this period, the voyage of Captain Cook with Sir Joſeph Banks was projected. A gentleman ſkilled in the knowledge of comparative anatomy was wanted for the purpoſe of examining and deſcribing the new animals they might chance to find: Jenner was fixed upon as the beſt calculated for ſuch an office, and lucrative conditions were propoſed; but his affection for his brother already mentioned, induced him to decline an offer ſo ſeductive to a lover of natural hiſtory.

This fraternal attachment, which continued to the death of the latter, annihilated every proſpect of emolument from diſtant ſources, and determined him to ſettle in Berkeley, the place of his nativity, to cultivate the practice of ſurgery and the purſuits of natural hiſtory in the country; ſoon after which the degree of Doctor of Phyſic was offered him by the Univerſity of Erlingen; an honour he declined, as incompatible with the profeſſional diſcharge of ſurgery.

An incident afterwards occurred which appeared much more likely to detach him from the immediate ſociety of his beloved relative. He happened to dine with a large party at Bath: Something was introduced at the table which required to be warmed by the application of the candle; and doubts were expreſſed by ſeveral perſons preſent, whether the more ſpeedy way would be, to keep the flame at a little diſtance under, or to immerſe the ſubſtance into it. Jenner deſired the candle to be placed near him, and immediately put his finger into the flame, ſuffering it to remain ſome time; he then put his finger above it, but was obliged to ſnatch it away immediately.—"*This, Gentlemen,*" *ſaid he,* "*is a ſufficient teſt.*"—The next day he received a note from General Smith, who had been of the party the preceding day, and who was before that time an utter ſtranger, offering him an appointment in India, which would inſure him, in the courſe of two or three years, an annual income of 3000*l.* The offer was referred to his brother; and our Jenner, from his attachment to him, declined it.

Some may, perhaps, be ready to conclude that fraternal affection was carried to a degree of weakneſs—But who can avoid admiring the heart that is ſuſceptible of ſuch tender affections? Some may piouſly ſuggeſt, that in conſequence of the latent deſigns of Heaven, he was happily prevented from engaging in diſtant purſuits, to announce to the world ſome grand diſcovery, and to eſtabliſh a new æra of medical ſcience, events which have ſince taken place.

In tracing a character thus rendered illuſtrious, the mind dwells upon it with increaſed pleaſure, in contemplating the combination of moral ſentiment and practical virtue—where the generous paſſions are ſubſervient to ſound reaſon, which directs them to promote public good and private happineſs, as Fenelon well obſerves, "*La vertu, en reglant les paſſions, n'eteint point le ſentiment.*"

My reſpectable auditory will permit me to illuſtrate this ſentiment, by exhibiting the beneficence of our amiable aſſociate.

An ingenious but unfortunate member of this Society, after many ineffectual ſtruggles to ſurmount pecuniary difficulties, fell a victim to diſeaſe, leaving a widow and children pennyleſs. From early friendſhips, I was deſirous of raiſing by ſubſcription, a ſmall ſum to enable them to put on a covering more deſirable than ſackcloth and aſhes. I addreſſed a letter to Dr. Jenner on the ſubject, and ſpecified the amount of the donation I wiſhed him to beſtow. Suffice it to ſay, that he thanked me for affording an opportunity of aſſiſting objects of diſtreſs, and ſent me a ſum exceeding my requeſt.

A few days afterwards he intimated to me, that he feared that a reſpectable perſon, whoſe name on this ſubject ſhall never paſs my lips, laboured under pecuniary embarraſſment; I expreſſed my willingneſs to offer my mite in conjunction with his. We ſoon, however, turned the converſation to ſome other ſubject. Jenner has a heart not made of ſtone or clay; and I venture to ſay, that the object of our converſation was the companion of his couch, for early in the morning I received a letter, which is too laconic to fatigue you in hearing:—

"I write this note juſt to propoſe an amendment with reſpect to the ſum for the uſe of our friend. Will you let it be fifty inſtead of thirty guineas?

E. Jenner."

I may here obſerve, that not any part of theſe memoirs is immediately derived from our diſtinguiſhed aſſociate. From his friends I have drawn my principal information. The laſt to whom I applied, though known to me merely by correſpondence, favoured me with ſome traits of his beneficence in the following words: "As for his generoſity, it is conſtant and un-

bounded. It is not like an intermitting ſpring, which flows by ſtarts, and as it were by caprice; but it reſembles a perennial fountain, which ever gladdens the verdant plains, and never diſappoints them of their expected refreſhment. Yet, although his generoſity never intermits, its ſtream is ſometimes poured forth with an unuſual flood; an inſtance of which is, his offer of £. 1000, to equip a veſſel for the purpoſe of introducing the vaccine inoculation into the Eaſt Indies, when the parſimony of Government neglected to do it."

During his reſidence in the country, our aſſociate lightened the ſeverer duties of his profeſſion by the ſtudy of phyſiology and natural hiſtory.

In 1788, his "*Obſervations on the Natural Hiſtory of the Cuckow*," appeared in the Philoſophical Tranſactions, which were admired and approved by the beſt informed naturaliſts in this department of ſcience. He has ſince attempted to demonſtrate, through the medium of comparative anatomy, that what exiſt in human lungs, in the form of tubercles, are really hydatids.

To one attached to natural hiſtory, the purſuit of ornithology, with which the emigration of birds is immediately connected, muſt afford ſingular pleaſure. The outlines of a paper on this ſubject have often been ſpoken of by Jenner to the Members of the Royal Society, and which contain many intereſting and novel obſervations, but which his numerous engagements have hitherto prevented him from communicating to the public.

Thus early diſtinguiſhed as a Naturaliſt, he was elected a Fellow of the Royal Society of London; and in 1792, he took his diploma of Doctor of Phyſic.

We have ample reaſon to conclude, that many important eſſays proceeded from his pen. By a late publication of Dr. Parry's, of Bath, it appears that the diſcovery of the ſuppoſed cauſe of angina pectoris originated with him, whilſt his modeſty repels him from the juſt claims of originality.

Of theſe, however, a tranſient view only is taken; the mind abſorbed by mighty objects paſſes over inferior ones, as the ſtars are extinguiſhed by the brilliancy of the ſun. With a new æra of exiſtence, afforded by the diſcovery of vaccine inoculation, the exuberance of gratification, the charms of health, the perfection of beauty, crowd upon imagination, agitate every tender ſympathy of the heart, and delight all the intellectual powers of the ſoul!

The mind repoſing after ecſtacies derived from the contemplation of a diſcovery the moſt prominent in utility, looks with a lively curioſity to ſcrutinize into its origin, which I ſhall now attempt to explain.

About the year 1775, inoculation of the ſmall-pox was much practiſed in Glouceſterſhire, after the Suttonian plan. Jenner, who then practiſed ſurgery, obſerved, that among thoſe whom he was frequently called upon to inoculate, many reſiſted every effort to give them the ſmall-pox, in conſequence of their having undergone the cow-pock, contracted by milking cows affected with a peculiar eruption on the teats. He found, however, that ſome of thoſe who had undergone the cow-pock, on being afterwards inoculated with the ſmall-pox, took this virulent diſeaſe.

This diſcovery damped in ſome degree his ardour; but the genius of Jenner triumphed overy every obſtacle. By accurate inveſtigation, he aſcertained that the cow was ſubject to ſome varieties of ſpontaneous eruption on her teats, all capable of

communicating sores to the hands of the milkers, although not all the real cow-pock. The surmounting of this obstacle enabled him to form a distinction between these diseases; only one of which he denominated the true, the others the spurious cow-pock, as possessing no specific power over the constitution.

Scarcely had this impediment been removed, before another of seemingly greater magnitude started up; for it was found, that a person who had milked a cow under the true cow-pock, and had thereby apparently gone through the disease with others, was liable to receive the small-pox afterwards. Which of us, Gentlemen, would have pursued the subject a moment afterwards? Disappointed and thwarted in our hopes, we should have relinquished for ever a subject that seemed to afford no criterion of success or security. Thanks to the genius of Jenner, or to that Power that inspired and destined him to rank among the benefactors of mankind, his energy surmounted every obstacle, and led him to reflect, that the operations of Nature are generally uniform, and that it was not probable the human constitution (having undergone the cow-pock) should in some instances be perfectly secured from the small-pox, and in others remain unprotected, he resumed his labours with redoubled ardour, and the result was fortunate; for he now discovered, that the virus of the cow-pock was liable to undergo progressive changes, from the same causes precisely as that of the small-pox; and that when it was applied to the human skin in its degenerated state, it would produce the ulcerative effects in as great a degree as when it was not decomposed, and sometimes far greater; but having lost its specific properties, it was incapable of producing that change in the human frame which is requisite to render it unsusceptible of the variolous contagion: hence it appeared evident, that a person might milk a cow one day, and, having caught the disease, be for ever secure; while another person, milking the same cow the next day, might feel the influence of the virus in such a way as to produce a sore

or ſores, and in conſequence of this, might experience an indiſpoſition to a conſiderable extent; yet, as has been obſerved, the ſpecific quality being loſt, the conſtitution would receive no peculiar impreſſion.

During this inveſtigation, he was ſtruck with the idea that it might be practicable to propagate the diſeaſe by inoculation, after the manner of the ſmall-pox, firſt from the cow, finally from one human being to another; he boldly made the attempt, and for ever ſecured humanity from deploring the ravages of the moſt peſtiferous diſeaſe that ever viſited the earth; and in 1798 he divulged this wonderful diſcovery to an admiring and aſtoniſhed world.

Medical profeſſors have often obſerved, that inoculation of variolous matter, though repeatedly performed, has not produced ſuch an eruption of the ſmall-pox as affords a ſecurity againſt the infection of this diſeaſe in future. Jenner experienced an analogous reſult in vaccine inoculation; he found that herpetic eruptions in children, occaſionally prevented the vaccine, as well as the variolous virus from producing their correct action. That the ſkin although it might be apparently ſound, at the point of inſertion, is nevertheleſs ſo influenced by the diſeaſe, as frequently to baffle every effort to produce a correct puſtule, and conſequently to ſecure the conſtitution from the contagion of the ſmall-pox; hence he inferred, that practitioners ſhould be particularly circumſpect when they inoculate thoſe who have cuticular diſeaſes, and that the danger of inſecurity would be at once obviated, if on the appearance of an irregular puſtule the diſeaſe were to be ſubdued by proper applications, and the patient then re-inoculated.

"Anomalies," he obſerved, "aſſuming different forms, may be excited, according to the qualities of the virus applied, or the ſtate of the perſon inoculated; but by far the moſt frequent

variety or deviation from the perfect pustule, is that which arrives at maturity, and finishes its progress much within the time limited by the true. Its commencement is marked, by a troublesome itching; and it throws out a premature efflorescence, sometimes extensive, but seldom circumscribed, or of so vivid a tint as that which surrounds the pustule completely organized; and, (which is more characteristic of its degeneracy than the other symptoms) it appears more like a common festering produced by a thorn or any other extraneous body sticking in the skin, than a pustule excited by the vaccine virus. It is generally of a straw colour, and when punctured, instead of the colourless, transparent fluid of the perfect pustule, its contents are found to be opaque. A little practice in vaccine inoculation, attentively conducted, impresses on the mind the perfect character of the vaccine pustule; therefore, when a deviation arises, of whatever kind it may be, common prudence points out the necessity of re-inoculation. The deviation, when it arises from the cutieular disease just noticed, generally corresponds with that above recited. If the pustule is not much disturbed in its course by scratching, it commonly terminates in a scab of a pale brown or amber colour, and soft in its texture, compared with that produced by the true vaccine pustule; and there is abundant testimony to conclude, that the fluid taken from a spurious vaccine pustule thus excited, is capable of propagating and perpetuating its like."

Hence, whenever the pustule has an irregular appearance, after removing the eruptive disease of the skin, inoculation should be repeated, to obviate the most distant insecurity.

It is rarely that genius, however distinguished, is so accurate as to give a first essay, even upon a subject in some measure familiar, without omission or redundancy, both as to matter and composition. To delineate a new field of discovery, from whom could we expect, not only a perfect outline, but the com-

pletion of every tint of light and ſhade! Theſe, however, were ſo accurately united in his "*Inquiry into the Cauſes and Effects of the Variolæ Vaccinæ*, as to induce a ſagacious Phyſician, who never uttered a ſentence without weighing its import, unequivocally to declare, "It appears to me, that none of the facts and obſervations introduced by Dr. Jenner, have been diſproved or refuted; and that no information has been gained on any material point by all that has been written upon the ſubject ſince the publication of his firſt treatiſe:" and public conviction to this moment confirms the declaration of Denman.*

Some, indeed, learned members of this Society, in which I ſee a Ring, an Aikin, and an Addington,† may be ranked among the coadjutors of Jenner, and have offered their handful of mortar to cement the noble edifice; but Jenner alone is the architect who laid the foundation of the glorious temple, on whoſe ſtately dome future generations ſhall gratefully inſcribe

JENNERI
GENIO SALUTIFERO.

Had our illuſtrious Aſſociate ſordidly appropriated the fruits of his diſcovery to his private emolument, he might have acquired incalculable wealth; but elevated by the dignified impulſe of univerſal benevolence, he voluntarily ſacrificed private benefit to public good, and gratuitouſly conferred upon mankind the means of ſaving 800,000 lives every year; or, the ſacrifice of 2500 human beings every day of the world's exiſtence.

The philanthropy of Jenner did not confine itſelf within the limits of an empire, but extended from pole to pole: After divulg-

* Here we muſt beg to diſſent from the learned author; as reſtriction to a particular period of taking the vaccine virus, by Dr. Jenner, has been amply demonſtrated by experiment to have no foundation. *Editor.*

† Theſe Gentlemen, who are Members of the Medical Society, have diſtinguiſhed themſelves as authors on Vaccine Inoculation.

ing to Europe the means of ſecurity from the ſmall-pox, he was ſolicitous of conveying to India the ſalutary bleſſing, which all Europe accepted with gratitude and avidity; to effect which purpoſe he gave me authority to ſubſcribe one thouſand guineas in his name towards defraying the expenſe of conveying vaccine matter to Ceylon, and our other extenſive Aſiatic poſſeſſions. In one of his letters to me, he introduces the plan he had recommended to the Government, in hope of crowning his exertions with ſpeedy and certain ſucceſs.

"My firſt attempt was about the concluſion of the year 1799, by ſending out my publications on the ſubject of the cow-pox, and a large quantity of vaccine virus, on board the Queen Eaſt Indiaman. This ſhip unfortunately was loſt at ſea. On hearing this diſaſtrous event, I went on renewing my efforts to introduce vaccination amongſt them, by ſuch means as had proved ſucceſsful in tranſporting the virus to countries far diſtant from this; but it never reached the ſhores of Hindoſtan in perfection.

"I was ſent for twice to the Secretary of State's Office, (Lord Hobart's,) where preſſing ſolicitations had arrived for vaccine matter, on account of the devaſtations the ſmall-pox was making, particularly in the Iſland of Ceylon. I repreſented in the ſtrongeſt terms the neceſſity of employing means more effectual than ſending out dried matter, and that I would engage to point them out.

"The following was my propoſition:—That on board ſome ſhip going to India, twenty recruits, or men of any deſcription that had not had the ſmall-pox, ſhould be ſelected. That I ſhould be allowed to appoint a ſurgeon to attend them, perfectly converſant with vaccine inoculation.

"Thus I engaged that the diſeaſe ſhould be carried in its moſt perfect ſtate to any of our ſettlements.

"After some deliberation, my proposals were, each time, rejected, and I was requested to put up matter in a way the most likely to succeed. This I complied with, and did my best; but, as I told the gentlemen at the board, with only faint hopes of success.

"Ruminating on the calamities to which our countrymen and the natives of Hindostan are exposed, and on the facility of subduing the small-pox, were the cow-pox once established amongst them, I was struck with the idea, that that obstacle was by no means invincible; nothing being required to remove it, but a ship properly equipped. It was then that I wrote to you on this subject, and proposed the immediate raising by subscription a sum sufficient to defray the expenses, at the same time requesting you to put my name down for a thousand guineas.

"Happily, soon after, intelligence was received that vaccine matter had reached India in perfection, through the persevering industry of my friend Dr. de Carro of Vienna. It was by his means that it was first planted in Constantinople, and from thence he contrived that it should move forward to Bombay. You need not be told with what exultation it was received by all ranks of society; the enlightened European and the poor Hindoo, both hailing it alike as the deliverer from a dreadful pestilence."

The discovery of vaccine inoculation, when first announced by Jenner, was so wonderful and so unexpected, as rather to dazzle than convince his contemporaries of its vast importance. Even to many scientific men, it appeared most incredible, whilst they wished to see realized what they had deemed scarcely possible. Profound truths, or the vivid rays of light, on their first impulse, may confound intellect, or confuse vision: hence, observed the modest Fontenelle, "If both my hands were full of truths, I would open one only at a time."

At length, experience has enabled the world to appreciate the importance of a diſcovery, unequalled in hiſtory, and gratitude has paid its votive offerings to the genius of Jenner, from the thrones of both the Cæſars, the Imperial Parliament of Great Britain, and the various ſocieties of literary characters throughout the civilized world. Whilſt in him Britain claims a diſcovery, which will be recorded to her glory as long as a Newton or a Harvey ſhall dignify the page of ſcience. One weighed the globe in the ſcale of gravitation, the other explained to man the laws of his exiſtence; but to Jenner was devolved the power of preſerving that exiſtence; and to this ſociety will remain to futurity the honour of owning him its early aſſociate; for, however powerfully envy or malignity may attempt to leſſen the importance of the Jennerian diſcovery, or to depreciate the dignified character of its author, time will prove the vindicator of truth. As Linné anſwered one who oppoſed his ſexual ſyſtem of botany, by pointing to an academy of children—"Theſe," ſaid he "will be our judges;" ſo Jenner, not walking over hecatombs of the ſlain, not ſurveying with melancholy retroſpect, thoſe rendered blind or deformed by variolous infection, may point to the riſing generation, and enjoy the ſuperlative gratification of contemplating myriads of fellow-creatures reſcued from a deadly peſtilence; which, under the bleſſing of Providence, he lived to ſubdue. Conſcious, as he muſt be, of the high eſtimation in which he is held among philoſophers and ſages, he ſhuns adulation; and courts rural retirement, whenever his profeſſional duties admit of moments of leiſure; moments not given up to eaſe and inglorious indulgence. Whilſt the great and opulent have been protected by his diſcovery; in the philanthropy of his mind, he confers the bleſſing equally on the friendleſs and the poor. The manner in which theſe moments of relaxation are ſpent, is deſcribed in ſuch appropriate language in a letter I recently received from a correſpondent, as to induce me to introduce it here.

"After some deliberation, my proposals were, each time, rejected, and I was requested to put up matter in a way the most likely to succeed. This I complied with, and did my best; but, as I told the gentlemen at the board, with only faint hopes of success.

"Ruminating on the calamities to which our countrymen and the natives of Hindostan are exposed, and on the facility of subduing the small-pox, were the cow-pox once established amongst them, I was struck with the idea, that that obstacle was by no means invincible; nothing being required to remove it, but a ship properly equipped. It was then that I wrote to you on this subject, and proposed the immediate raising by subscription a sum sufficient to defray the expenses, at the same time requesting you to put my name down for a thousand guineas.

"Happily, soon after, intelligence was received that vaccine matter had reached India in perfection, through the persevering industry of my friend Dr. de Carro of Vienna. It was by his means that it was first planted in Constantinople, and from thence he contrived that it should move forward to Bombay. You need not be told with what exultation it was received by all ranks of society; the enlightened European and the poor Hindoo, both hailing it alike as the deliverer from a dreadful pestilence."

The discovery of vaccine inoculation, when first announced by Jenner, was so wonderful and so unexpected, as rather to dazzle than convince his contemporaries of its vast importance. Even to many scientific men, it appeared most incredible, whilst they wished to see realized what they had deemed scarcely possible. Profound truths, or the vivid rays of light, on their first impulse, may confound intellect, or confuse vision: hence, observed the modest Fontenelle, "If both my hands were full of truths, I would open one only at a time."

At length, experience has enabled the world to appreciate the importance of a diſcovery, unequalled in hiſtory, and gratitude has paid its votive offerings to the genius of Jenner, from the thrones of both the Cæſars, the Imperial Parliament of Great Britain, and the various ſocieties of literary characters throughout the civilized world. Whilſt in him Britain claims a diſcovery, which will be recorded to her glory as long as a Newton or a Harvey ſhall dignify the page of ſcience. One weighed the globe in the ſcale of gravitation, the other explained to man the laws of his exiſtence; but to Jenner was devolved the power of preſerving that exiſtence; and to this ſociety will remain to futurity the honour of owning him its early aſſociate; for, however powerfully envy or malignity may attempt to leſſen the importance of the Jennerian diſcovery, or to depreciate the dignified character of its author, time will prove the vindicator of truth. As Linné anſwered one who oppoſed his ſexual ſyſtem of botany, by pointing to an academy of children—"Theſe," ſaid he "will be our judges;" ſo Jenner, not walking over hecatombs of the ſlain, not ſurveying with melancholy retroſpect, thoſe rendered blind or deformed by variolous infection, may point to the riſing generation, and enjoy the ſuperlative gratification of contemplating myriads of fellow-creatures reſcued from a deadly peſtilence; which, under the bleſſing of Providence, he lived to ſubdue. Conſcious, as he muſt be, of the high eſtimation in which he is held among philoſophers and ſages, he ſhuns adulation; and courts rural retirement, whenever his profeſſional duties admit of moments of leiſure; moments not given up to eaſe and inglorious indulgence. Whilſt the great and opulent have been protected by his diſcovery; in the philanthropy of his mind, he confers the bleſſing equally on the friendleſs and the poor. The manner in which theſe moments of relaxation are ſpent, is deſcribed in ſuch appropriate language in a letter I recently received from a correſpondent, as to induce me to introduce it here.

"About nine o'clock in the morning, I arrived at Berkeley, and immediately waited on my friend. He was just sitting down to breakfast. After the usual congratulations and inquiries respecting our common friends were over, I joined him in the repast of which he was about to partake. Our conversation, as might be expected, did not dwell long on other topics, but soon hastened to that important subject which has for some time arrested the attention of mankind, I mean the discovery of vaccine inoculation. I heard with much regret of the obstacles which envy, prejudice, and ignorance had raised to impede the progress of this salutary practice, and with heartfelt pleasure of its extensive and rapid propagation through almost every country of the globe. The parlour, in which we were sitting, looked into an agreeable lawn, on one side of which ran a walk, here and there perceptible between trees, till at length it was completely lost in a thick bower. I had observed, during our conversation, a great number of females, with children in their arms or by their sides, passing down the walk, and proceeding forward into the bower, which intercepted them from my view. The circumstance very much excited my curiosity; and I could not forbear interrupting the conversation to inquire of my friend what it meant. It has been my custom for some time, said he, to set apart one morning in the week for inoculating the poor; and this being the appointed day, the people you see are come from the adjacent villages on that account. You wonder, perhaps, continued he, to see them go so regularly into the bower and disappear; I will explain it to you. In the midst of those trees is a small mansion, built in the cottage stile; it consists of one room only, and was erected for the purpose of giving a rural appearance to that part of my garden. I have lately converted it into a place of utility; and the people who come to be inoculated assemble there, and wait until I come among them. It is for this reason I have given my little cottage the name of the Temple of Vaccina; and, like a faithful priest, added he, smiling, I am always anxious to find it filled with worshippers. But after breakfast, you shall go with me, and see in what

manner we proceed. I agreed to the propoſal with pleaſure, and in a few minutes we both roſe up, and went together to the cottage. We found it almoſt full of poor people with their children. My friend firſt examined the arms of thoſe he had inoculated the week before, and then inoculated others, ſtrictly enjoining the parents to bring them the next appointed day. I felt a mixture of pain and entertainment in hearing ſome of the poor villagers expreſs their apprehenſions reſpecting the benefit which vaccine inoculation afforded them, and relate the prejudices of their ruſtic neighbours. But the Doctor very well underſtands the art of dealing with their prejudices; and it gave me great pleaſure to obſerve the gentle and effectual manner with which he endeavoured to ſooth their minds. It is a pleaſing reflection, ſaid he, after they were gone out, that theſe poor children are for ever ſecured from the dreadful evils which the diſeaſe I am ſtriving to exterminate might have brought upon them: and when I conſider the multitudes of the human race who have already availed themſelves of the benefit, which I had the felicity to announce to mankind, and thoſe who will hereafter avail themſelves of it, my pleaſure is ſo great, and my gratitude towards that Being whom I know to be the author of every bleſſing is ſo lively, that I can ſcarcely expreſs either the one or the other. You have, ſaid I, good reaſon to feel ſo: and with regard to your little temple here, reverting to the appellation which he had given to his cottage, it is a fortunate thing for us, that the ſyſtem of polytheiſm has given place to the dictates of truth, elſe Vaccina would have been introduced as a new deity to the world, and men, if they regarded the advantages which ſhe produced, would have done homage in this rural manſion, with greater delight and veneration than in the moſt magnificent and ſumptuous temples that ever attracted the admiration of Greece and Rome."

In contemplating the extent of this ſplendid diſcovery, and the facility with which the public good it promiſes may be accompliſhed; and combining the various other diſcoveries and

improvements in science, which we have witnessed, what a sublime prospect is opened to the ardent genius of aspiring and ingenuous youth! To instance a Franklin; who, by means of the medium of a small metallic wire, subdued and governed the most tremendous agent in nature, and opened to us the arcana of electricity; a discovery which Galvani and Aldini further extended; and by which we are now led to conclude, that from the Gymnotus electricus, that diffuses the electric power in the ocean; from all animal and brute matter, up to the clouds floating in the ambient air, an ætherial agency pervades all nature, and influences her hidden operations; but, as Seneca observes, *Multa etenim sunt quæ esse audivimus, qualia autem sint ignoremus! Quamque multa venientis ævi populus, ignota nobis, sciet.*

In a particular manner, the discovery which this society commemorates this day, affords the strongest encouragement to cultivate, with ardour, the science of medicine, after the example of our illustrious associate, to whom has been unanimously voted this gold medal, for his discovery of vaccine inoculation; and which, in his absence, I deposite, agreeably to his request, with the learned President of this society; who has, upon numerous occasions from this chair, which he has so long and honourably filled, instructed and improved a listening and grateful auditory: to my friend, Dr. Sims, therefore, do I, with the utmost pleasure, commit this medal, bearing the following inscription,

Don. Soc. Med. Lond. An. Salut. 1773.
Instit.
E. Jenner, M. D.
Socio suo eximio
ob
Vaccinationem
Exploratam;

in honour of Dr. Jenner; as the greateſt mark of approbation we can offer to the unrivalled merit, and deathleſs fame, of that man, who has removed the veil which concealed the ſacred myſteries of Iſis in this profound alluſion to nature:

ΕΓΩ
ΕΙΜΙ ΠΑΝ ΤΟ ΓΕΓΟΝΟΣ
ΚΑΙ ΟΝ, ΚΑΙ ΕΣΟΜΕΝΟΝ
ΚΑΙ ΤΟΝ ΕΜΠΕΠΛΟΝ
ΟΥΔΕΙΣ ΠΩ ΘΝΗΤΩΝ
ΑΠΕΚΑΛΥΨΕΝ.*

Dr. LETTSOM'S "*Expoſitions on the Inoculation of the Small-pox, and of the Cow-pock.*"

AFTER the experience of a great portion of the world in favour of the inoculation of the Cow-pock, and the moſt ample proofs of the danger of inoculating the Small-pox, it could hardly have been imagined, that the people of this country, where the providential diſcovery was made, ſhould have been the only exception in Europe to its very general adoption; for in many parts of the continent, the Small-pox is nearly, if not altogether extirpated; and had the inoculation of the Cow-pock been univerſally adopted in this country, the Small-pox would alſo have been exterminated here, and known only by name.

Unfortunately for the health and exiſtence of thouſands of children, individuals, even of the medical profeſſion, have attempted to excite the fears of parents, and encouraged the

* I am whatever is, or has been, and will be; and no mortal has hitherto drawn aſide my veil.

inoculation of the Small-pox, by which the diſeaſe has become ſo extended and dreadfully fatal, as to have killed FORTY SEVEN CHILDREN in London, within the laſt ſeven days only.

Viewing this fatality with painful concern, becauſe it might have been avoided; and being placed with the reſt of my profeſſional brethren, as guardians of the health and ſafety of the people; and perceiving that numbers are daily deſtroyed by the Small-pox, I deem it my duty to adviſe the parents of children to "ſtay the peſtilence," and not to ſuffer themſelves to be deceived by partial and dangerous inſinuations.

Although the Cow is the healthieſt and cleaneſt of all animals, the enemies of the Cow-pock have called this providential preſervative, a *beſtial diſeaſe*, whilſt they eat the meat of the Cow to preſerve their conſtitutions, and drink its milk which proceeds from the ſame ſource that affords the Cow-pock!

They report that it produces eruptions, whilſt every body knows that children are almoſt univerſally liable to eruptions in their infancy; but the Cow-pock, which excites little if any diſeaſe, does not diſorder the conſtitution, and conſequently cannot be the cauſe of theſe eruptions. Many of theſe ſuppoſed caſes I have viſited, and found them in general as ſlight as the tooth-raſh, or other trivial eruptions, to which infants are liable in their uſual courſe of health, whether they have had the Cow-pock or not. I have indeed known many inſtances of eruptions in children having diſappeared after they had been inoculated with the Cow-pock, and have afterwards enjoyed better health; but as the Cow-pock is always ſafe, even in the earlieſt ſtage of childhood, parents have hence been induced to have infants inoculated in a few days or weeks after their birth; at a period, when very few of them would eſcape without ſome eruptive affection, in the ordinary courſe of health: of ſuch common occurrence to moſt infants, the enemies of the Cow-pock have availed themſelves, and circulated reports of

dangerous eruptions from the inoculation, which every mother ought to have known is familiar to children; and not in the moſt diſtant manner dependent upon or connected with the Cow-pock. I will riſk the aſſertion, that no one new eruption or affection ever reſulted from the Cow-pock. There never was a period in hiſtory, that children were not liable to various kinds of eruptions. Dr. Daniel Turner, who was a member of the College of Phyſicians in London, who wrote about the year 1726, declares, that "among the diſeaſes of infants and young children, ſcarce any attends more frequently than puſtulary or "ſcabby eruptions, in ſeveral parts of their bodies, as the "breech; but more eſpecially their foreheads, brows, and other "parts of the face, which we find oftentimes over-run with "dry and cruſty ſcabs." 3d edit. 1726, ch. iv. p. 69. This has perhaps been the caſe ſince the world began, and may continue as long as children exiſt.

I have taken a great deal of pains to inquire after, and viſit many of theſe caſes, without finding one to juſtify theſe reports. Some I found were really the common itch, which had not appeared till ſeveral months had elapſed after inoculation; ſome had the chicken-pox; ſome the ſcarlet fever; ſome were merely the bites of bugs or fleas; but I never was yet able to find one inſtance of eruption, that could be fairly deduced from the Cow-pock; and from the notorious falſity of thoſe I have examined, I am now of opinion that no one ſerious or troubleſome eruption was ever occaſioned by the Cow-pock; and theſe inquiries have all tended to confirm me in the perfect ſafety and healthineſs of the proceſs of inoculating the Cow-pock at every period of life.

Within the laſt three days only, I have taken the trouble of inquiring into the hiſtories of five of theſe ſuppoſed dreadful inſtances of the moſt violent eruptions and humours ſaid to have been brought on by the Cow-pock. The two firſt which I viſited, were children, who had recently had the Cow-pock,

and afterwards from some transitions of the weather, which at that time had been very variable, some febrile indisposition had occurred, with a slight efflorescence of the skin, frequent under such circumstances. I saw the children about the third day of indisposition, at which time the efflorescence was scarcely perceptible, and after prescribing a medicine suitable to the fever, I retired, thinking it unnecessary from the slightness of the complaint to repeat my visit. The third case I visited, was in consequence of a current report, that a child had taken the Small-pox, after having been inoculated with the Cow-pock; from a view of the eruption, I did not think it to be the Small-pox; however, the father thus accosted me, "I pay so little attention to the reports about my child, that had I a thousand "children, they should all have the Cow-pock." He was a person of good information, unbiassed by unfounded stories. The fourth subject was one which had excited very general alarm, and given rise to severe censures against the Cow-pock. As an individual it occasioned me more concern, as I had long entertained an high esteem for the family, most branches of which had been under my medical care. The child I allude to was described to me as having been nearly reduced to death by the virulence of the sores of the newly fabricated species called the green cow-itch of Dr. Mosely, which had extended from head to foot. I had often casually heard accounts of this miserable object, as it had been emphatically called, but I paid little attention to them, imagining them, like other similar tales, totally unfounded; at length however, I had the pathetic history from the parents themselves, in a party of company; my attention now was seriously arrested, and I requested permission to visit the object, and at least to endeavour to console the distressed parents. The next day I attended, and had the following narrative from the mother, on whose knee I found her only child; "that it had been inoculated about twelve months before, and continued perfectly well during the ten following months, at which period, it was sent to the care of a person in the country,

for the benefit of the air, whoſe child had likewiſe been inoculated with the Cow-pock, and like this infant, had been ſince covered with a ſimilar foul eruption and running ſores."

After this narrative, I cannot expreſs the degree of pleaſure I felt, in declaring that this child had caught a moſt violent itch from the other in the country. I immediately ordered the uſe of ſulphurated ointment to the eruption, and in four days time to waſh it off, as the child would then be well; and ſo it has proved.

The fifth caſe was truly afflicting. The child of a large family reſiding near London, was inoculated with the Cow-pock; at the ſame time the brothers and ſiſters who had not had the Small-pox underwent the ſame proceſs in the moſt favourable manner about three years ago; they all continued in perfect health for two years and a half, when the youngeſt child, the ſubject of the preſent narrative, caught the chicken-pox, without any material inconvenience; ſoon afterwards it was attacked with the meaſles in the moſt ſevere degree, which has ſo reduced the conſtitution as to excite ſtrongly marked ſymptoms of ſcrophula and conſumption, with ſores on the body uſual in ſtrumous maladies.

Thus I found that in every inſtance the reports of miſchief from the Cow-pock were moſt completely unfounded; but had they come under the cognizance of Dr. Moſely, now refuted by Merryman and others, or of a perſon calling himſelf Dr. Squirrel, they might by the magic powers of imagination and prejudice, have worked up narratives too horrid for the nerves of tender mothers and goſſiping nurſes; but like the ſtory of M. Montague's children, the baſeleſs viſion will be diſſolved, and the thick miſts which exhibit frightful ſpectres will be diſſipated by truth and plain ſenſe.

With reſpect to the laſt child noticed, when I blamed the parents for circulating ſtories which had not the leaſt ſhadow of truth to ſupport them, they replied that they were deceived by old women and nurſes, who told them that they knew twenty other ſimilar caſes. I ſtrongly inſiſted upon having their references, as I informed the parents that I would inquire after them; but out of the twenty, one only could be recollected, which fortunately I had myſelf attended, and like the preſent caſe had not the leaſt affinity with the Cow-pock.

Some parents have, I fear, been ſo led away by the vulgar prejudices as to aſcribe the eruptions which may have appeared on their children who have had the Cow-pock, to this ſource; whilſt in reality they have originated from themſelves. This is not a vague inſinuation, for I have met with many ſuch examples.

Much has been urged againſt the Cow-pock, as not affording a permanent ſecurity againſt the Small-pox: that numerous miſtakes have been committed I am well perſuaded; I know of many inſtances of the Chicken-pox having been inoculated for the Cow-pock; many perſons unacquainted with the true Cow-pock, have incautiouſly practiſed inoculation; or by neglecting to follow Dr. Jenner's golden rule, never to inoculate from the Cow-pock, after the circular redneſs or efflorescence is formed*; many children have been inoculated, and whether the Cow-pock has taken effect or not, has not been aſcertained, in conſequence of theſe children not having been ſeen again by the inoculator: like the matter of the Small-pox, it does not always infect the ſubject: theſe, however, afford no proofs againſt the utility of the Cow-pock, but very ſtrong ones of ignorance and neglect.

* This has been proved to be erroneous. The fact of the ſcab proving effectual to excite the diſeaſe, ſufficiently evinces that every preceding period is adequate to the ſame reſult. *Editor.*

The idle tale that the Cow-pock does not ever afterwards ſecure the perſon inoculated from the Small-pox, but preſerves it only for a few years, has been held up to frighten the timid, but it is ſo contrary to all analogy and experience, that it ſcarcely requires a ſerious refutation.

It has been proved by many inconteſtable facts, that perſons who have had the Cow-pock, at the diſtance of from twenty to ſixty years paſt, have hitherto continued in ſecurity from taking the Small-pox, although to my knowledge ſome of them have been inoculated with the Small-pox by way of experiment; but admitting the known falſity, that the Cow-pock affords a ſecurity againſt the Small-pox for three or four years only, yet even under this ſuppoſition, were every perſon inoculated with the Cow-pock, the infection of the Small-pox would be annihilated, under which circumſtances the inoculated ſubjects and their poſterity would be ſecured from the Small-pox, becauſe there would be no infection; without the exiſtence of which the Small-pox could not be propagated.

Although I never ſaw an inſtance of the Small-pox following the inoculation of the Cow-pock, caſual caſes from ſome cauſe or other may have happened, as well as after the inoculation of the Small-pox. In one week I lately attended two children in different families, who had been inoculated with the Small-pox, by reſpectable practitioners, and took the diſeaſe afterwards, and ſuffered ſeverely from it. I am now attending a lady who was inoculated by the late Baron Dimſdale, and afterwards had the natural Small-pox. A relation of mine inoculated by one of the Sutton's, ſince caught the Small-pox and died; but ſuch inſtances are too frequent to leave any doubts of theſe facts, and as I have obſerved, may have likewiſe occurred in a few inſtances after the Cow-pock.

Whilſt this eſſay was going to preſs, I viſited in a family of the name of Johnſton, in Sweet-apple-yard, Biſhopſgate Street, a child about eleven years of age, whom I found labouring un-

der the confluent Small-pox, after having been inoculated with the Small-pox, by a reſpectable ſurgeon nine years ago. Two other children of the family were inoculated with the Cow-pock, who eſcaped infection, as well as another child of the family, who had been inoculated with the Cow-pock, five years previouſly to the preſent time; by theſe inſtances, it might be inferred, that the inoculation of the Cow-pock affords as certain a ſecurity, if not a more certain one againſt the Small-pox, than the inoculation of the Small-pox itſelf.

I have known children inoculated with the Cow-pock, inſtantly at their birth, in conſequence of this event happening in a boarding houſe, loaded with the infection of the Small-pox, but theſe remained perfectly ſecure from this diſeaſe. I have even known two children ſuck one woman, one of the infants having taken the Small-pox, when the other was inoculated with the Cow-pock, and both continued to ſuck, till the Small-pox child died, whilſt the other child under the Cow-pock, received no other infection.

Numerous inſtances have I known of children who have had the Cow-pock, afterwards having ſlept with their brothers or ſiſters in the worſt kind of the Small-pox, but I never yet knew any one of theſe vaccinated children to have taken the Small-pox, in conſequence of theſe trials, during an attentive practice ever ſince the Cow-pock was introduced. In viſiting any child in the Small-pox, I uniformly adviſe the parents to have their other children vaccinated; and ſo hideous does a child uſually appear, when labouring under the Small-pox, that in no inſtance has my advice been in vain; and although the child with the Small-pox may have died, I never knew any of theſe vaccinated children afterwards catch the Small-pox. Two exceptions to my advice did occur, but I only met the parents caſually; who oppoſed the Cow-pock, from the uſual fabrications they had heard, reſpecting humours, and ſimilar abſurdities. In one of theſe families there were three children who took the Small-pox

ſoon afterwards; two of theſe died, and the other is ſo diſordered with the evil, which is no uncommon occurrence after the Small-pox, that death would have been preferable. This poor diſeaſed child was brought to me for advice, and then I heard of the dreadful cataſtrophe in their family. The other parents of two children reſided where I attended a family, whoſe three children had happily been inoculated with the Cow-pock, and I thought that the ſucceſs here, would have induced the parents of the other children to have partaken of the ſame bleſſing, but they violently replied, that their children ſhould not have a *beſtial diſeaſe*. I have ſince inquired after this family; unfortunate parents! they have loſt both of theſe children by the Small-pox; ſo that by the impoſing nonſenſe of not having a *beſtial diſeaſe* from the very animal that nouriſhed them and their children, they are rendered childleſs, like many other deluded parents! Does any perſon believe that the fluid of the cow is leſs pure than the humours of intemperate man?

Many well meaning people have oppoſed the Cow-pock, as they ſay, that they might not tempt Providence; if this means any thing, it would be tempting Providence leſs, to embrace this bleſſing which is afforded to ſave life, than by refuſing it. Chriſt himſelf uſed means to cure diſeaſes, and was particularly attentive to little children. It was ſaid, that he came to ſave life, and conſiſtently with this character, numerous inſtances are recorded of the tender intereſt he took in curing diſeaſes, but none of his refuſing his aid. It is in the firſt place our duty to uſe our reaſon and exertions, to preſerve ourſelves by proper clothing, houſes, food and drink, and truſt to Providence for the bleſſing; but no religion inſtructs us to be negligent and to truſt to Providence without we uſe thoſe endeavours to take care of ourſelves and our children, which reaſon enables us to do. In another ſenſe it might be uſed as an excuſe for every ſpecies of idleneſs, negligence and vice; any vagrant under this pretext might refuſe to work, and plead for his con-

duct, that he would "truſt to Providence," and hope to be fed without any exertion of body or mind; in ſhort, were this diſpoſition to become general, the farmer might neglect to ſow his corn; famine and anarchy would enſue, and man would be reduced to a ſtate below the beaſt that periſheth.

Some perſons argue, that they will not bring a diſeaſe on themſelves; this however, is no argument that they ſhould not uſe their reaſon to prevent diſorders. The Cow-pock is no real diſeaſe, but it prevents the worſt that ever afflicted mankind. Happy indeed would it be, for theſe very people who will not ſave their children's lives by the means afforded them, could they truly ſay that they have not brought diſeaſes upon themſelves, by intemperance, frequenting bad houſes, and by other immoralities, which really bring on half their diſorders. If they thus injure themſelves, it affords a more forcible argument for exerting their endeavours to preſerve thoſe under their protection from danger; and no danger is greater to children than the Small-pox; and there is no other ſecure means of preſerving them than the Cow-pock; under what excuſe then can parents heſitate to ſave their children from an almoſt certain calamity?

The inoculation of the Small-pox affords no more ſecurity againſt catching the Small-pox again, than the Cow-pock does; but inoculation of the Small-pox is always a dangerous experiment, as it ſometimes proves fatal; and where it does not kill, it diffuſes its own poiſon ſo extenſively as to have occaſioned more deaths than ever happened before the inoculation of it was practiſed. The Parliament of Great-Britain were convinced of this, after a careful examination of many eminent phyſicians and ſurgeons, and by the certain proof of the bills of mortality publiſhed every week in London; and before rewarding Dr. Jenner, the diſcoverer of the Cow-pock, they made the following declaration, after examining *Dr. Jenner, Dr. Aſh, Dr. Bradley, Mr. Home, Sir Walter Farquhar, Mr. Cline, Dr. Sims,*

Dr. Woodville, Dr. Blane, Mr. Knight, Dr. Moseley, Robert Pope, Lord Berkeley, Mr. Ring, Rev. G. C. Jenner, Mr. Birch, Dr. Saunders, Dr. Marshall, Mr. Griffiths, Dr. Dale, Dr. Denison, Mr. Taylor, Dr. Lister, Mr. Cuff, Dr. Skey, Dr. Lettsom, Dr. Frampton, Dr. Baillie, Dr. Croft, Dr. Nelson, Mr. Fuller, Mr. Long, Dr. Pearson, Lord Rous, Dr. Thornton, Mr. Addington, Dr. Rowley, Mr. Simpson, Dr. Lind, His Royal Highness the Duke of Clarence, Dr. Heberden, Mr. Gardner, Mr. Jordan, Mr. Keate, Mr. Robert Keate, &c. "that by the statements of "the mortality occasioned by the Small-pox in 42 years BEFORE "inoculation was practised in England, and of the 42 years "AFTER inoculation was practised, the result appears to be an "increase of deaths amounting to 17 in every 1000; the gene-"ral average giving 72 in every 1000 during the FIRST FOR-"TY-TWO YEARS, and EIGHTY-NINE IN THE FORTY-TWO YEARS, "ending with 1772; so as to make the whole cause of deaths "in the latter period, ONE THOUSAND SEVEN HUNDRED AND "FORTY-TWO!"

Admitting the facts and inferences urged by Parliament, which cannot be refuted, that the inoculation of the Small-pox tends to increase the deaths; what then must foreigners think of a Parliament that rewarded Dr. Jenner, for the discovery of the Cow-pock because it prevented the infection of the Small-pox, and its consequent destruction; and yet, that this very Parliament should tolerate a practice, and the inoculation of that disease, for the extinction of which they paid the reward. Had the Parliament, after exposing the baneful practice of inoculation of the Small-pox, acted with consistency, as the guardian of the public prosperity, this practice, so fatal to the community, ought to have been immediately interdicted; had this resolution sanctioned their primary one, five thousand youths, who have been since killed by the Small-pox, might now have been living members of the community to augment the population of that country which neglected their welfare, and the happiness of

thoſe parents, who, miſled by falſe inſinuations, ſurrendered their duty to prejudice. It may be aſked if our liberty ſhould be thus reſtrained? Certainly the liberty of doing miſchief, as murder, the ſetting of an houſe on fire, of introducing the plague or yellow fever. If perſons attempt to drown themſelves, the members of the Humane Society would undoubtedly oppoſe the liberty of ſuicide. Without ſalutary reſtraints, all the ſocial bands of ſociety would be diſſolved, and anarchy enſue.

After the diſcovery of the Cow-pock was made known, many people had the good ſenſe to have their children inoculated with it; in conſequence of which the deaths in London ſcarcely exceeded 600 during the whole of laſt year, a number nearly 2000 leſs than uſually occurred before the Cow-pock was introduced; but unhappily for the riſing generation, ſome medical perſons, and others, endeavoured early in the preſent year, to alarm the public, by circulating ſtories and repreſentations which impoſed upon many parents, and induced them to ſuffer their children to be inoculated with the Small-pox; by this practice the contagious poiſon has been ſpread throughout London to ſuch an extent, as that within the laſt ſeven days a very conſiderable number of children have been killed by it, as has been related. About the ſame period upwards of 250 patients I am informed were inoculated in the Small-pox hoſpital with the ſame infectious poiſon, and afterwards diſmiſſed from the hoſpital, thereby affording a more certain ſource of mortality, than if 250 mad animals had been at once let looſe upon unguarded victims.

It is truly ſurpriſing that in a ſcientific nation, there ſhould now be ſupported, at a great expenſe, ſuch a repoſitory of peſtilence as the Small-pox hoſpital. What term of reproach ſhould we apply to the Americans, if in imitation of the mother country, they ſhould maintain a repoſitory for keeping up and extending the yellow fever? What epithet ſhould we apply to

a nation that employed the ſame means to perpetuate and extend the plague? Suppoſe that they ſhould actually follow our example, we ſhould ſtill outdo the Americans and the Egyptians in miſchief, becauſe the Small-pox kills more than both the yellow fever and the plague.

I have long and carefully noticed the bills of mortality, in order to aſcertain, among other objects, the number of deaths produced by the Small-pox every week; which I obſerved to have gradually diminiſhed as the Cow-pock extended, till the number fell to one, and afterwards admitted of none. About this time it was, from the circumſtances I have mentioned of circulating falſe reports againſt the Cow-pock, that the inoculation of the Small-pox became prevalent, which, aided by the patients from the Small-pox hoſpital, rapidly extended this diſeaſe, and ſhortly ſwelled the number of deaths to no leſs than 47 victims in the ſpace of one week! that is from July the 9th to the 13th, 1805. Since which there have been killed in London alone, in the following four weeks, ONE HUNDRED AND TWENTY-FOUR PERSONS BY THE SMALL-POX! viz.

July 23, died of the Small-pox, 28.
30, ——— 24.
Aug. 6, ——— 24.
13, ——— 48.

The numbers of the blinded, maimed, or otherwiſe disfigured are not included.

About EIGHT HUNDRED THOUSAND have been inoculated with the Cow-pock, not one of whom, that I know of, has died, nor even one been maimed. What a bleſſing then to our children is the Cow-pock, and yet ſo ungrateful to Providence are ſome parents as to ſlight this ineſtimable bleſſing!

Although parents might have been unconſcious of the mortality they were thus occaſioning, the ſame could not apply to thoſe who ſpread the poiſon by the practice of inoculation, for they could not but be acquainted with its contagious nature, as well as with the deciſion of Parliament. The criminality of intentionally ſetting an houſe on fire, is well known, but ſince party walls have been adopted, the ſetting of 100 houſes on fire would probably prove leſs fatal to life, than the unguarded inoculation of a ſingle perſon with the Small-pox; one inſtance among others is well aſcertained, of a ſingle inoculated child having infected 17 other children with the Small-pox, eight of whom died. If one perſon were intentionally to kill another, the law would condemn the murderer to ſuffer death; and what apology can be reaſonably urged for propagating a poiſon, the mortal nature of which is univerſally known; but the extent to which it may ſpread is incalculable. Every medical profeſſor, therefore, ſhould religiouſly abſtain from the poſſibility of injuring a fellow creature, and abſolutely refuſe to gratify the caprice of the thoughtleſs and ignorant. It has been pleaded by ſome, that if they did not inoculate, another practitioner would, and at the ſame time that they might thereby forfeit the future attendance of the family. It has certainly been highly honourable to the faculty, that they have ſo generally promoted the inoculation of the Cow-pock, in order to exterminate a diſeaſe, which has afforded them more pecuniary profit than any other. The plea, however, that others would inoculate the Small-pox if they did not, might be uſed as a pretext for committing the moſt criminal and illegal action, even of murder itſelf. It muſt be admitted that, in many inſtances, the practitioner is placed in a painful and delicate ſituation, when requeſted to perform an act, againſt which his conſcience ought to revolt; but it may be preſumed that any family whoſe attendance is worth preſerving, would not only acquieſce in a rational explanation, but likewiſe entertain an higher eſteem for upright conduct, and a greater confidence in abilities directed by integrity: whatever might, however, be the reſult, no ſiniſter

consideration should be suffered to influence the acknowledged guardians of health to stifle philanthropy; to sanction injustice; or, in the words of the psalmist, "to give over to the pestilence;" and if moral sentiment, and the impulse of conscience are not powerful enough to support rectitude of conduct, the just restraints of law ought to be invariably exercised. If a person purposely introduced the plague or yellow fever into this kingdom, the punishment of such a delinquent could not be too severe and exemplary; but the plague and the yellow fever combined have not killed half the number of human beings that the Small-pox has done; and yet, however incredible it may appear, there are individuals who possess the temerity to advertise that they indiscriminately inoculate the Small-pox, the most mortal of all other pestilence whatever. In London alone, it has been remarked, that it kills above 2000 persons every year, besides those on whom it inflicts blindness, evil, sores, stiff-joints, and other maladies; whilst the Cow-pock has neither killed nor maimed one individual, although it has been practised throughout half of the globe, and has already nearly exterminated the Small-pox from most of the kingdoms in Europe, the British only excepted; against which every other maritime state should immediately institute a rigid quarantine, and continue it as long as we tolerate this most infectious and deadly poison, in order to prevent its introduction into those countries, where the good sense of the people and the wholesome regulations of the government may have annihilated it; for if we remain obstinate enough to keep up the disease, and to propagate it among ourselves by inoculation, we have no right to destroy our neighbours on the continent of Europe, by a pestilence which may be conveyed by infected clothes, twelve months after the existence of the disease.

In London there die upwards of 18,000 persons every year; of these rather more than 6,000 die in infancy; that is, there die about fifty persons every day, of whom seventeen are child-

ren, and of theſe children ſix die daily by the Small-pox and inoculation. To proceed in this ſtatement, founded on facts, about 700 perſons die every fourteen days in London; or 233 children in the common courſe of human events; that is, ſuppoſing that no diſeaſe were communicated to them by art. Now it is highly important to obſerve that upwards of 18,000 children have been inoculated with the Cow-pock in one year; and in the caſual courſe of human events, taking the whole duration of the Cow-pock proceſs at 14 days, there ſhould have died of theſe vaccinated children during the proceſs, no leſs a number than 233; but contrary to the common courſe of human events, and of caſual deaths, inſtead of 233 having died, not one has ſuffered the leaſt injury, much leſs the loſs of a ſingle life; but had theſe children not been inoculated with the Cow-pock it would hence be reaſonable to conclude that this number would actually have died; and hence, that beſides ſaving the 6000 children from the deſtruction of the Small-pox, it may be juſtly inferred, that it has prevented 233 deaths, which otherwiſe would have happened, had not the Cow-pock been communicated. Theſe inferences thus afford incontrovertible proofs that the Cow-pock ſecures, by its agency, a more certain continuance of health to children, than if it had not been employed. I am ſurpriſed indeed, the more that I reflect upon the number of deaths daily occurring to children, that none of theſe caſualties have ever occurred during the proceſs of the Cow-pock. If ſucceſs, therefore, almoſt beyond belief and previous imagination, be a proof of divine favour and bleſſing, this diſcovery of the Cow-pock, is doubly bleſt and favoured, by the providence of Him who rewards virtuous exertion even in this life.

This ought to produce a grateful and animating reflection to us, who own our countryman as the diſcoverer of this incalculable bleſſing, who might ſay with Joſeph to his brethren, "God did ſend me before to ſave life." Gen. 45. 5. Let us therefore ardently and generally embrace it, as foreign nations have alrea-

dy done; for by it we may save 50,000 lives a year among ourselves, which ought not to be suffered to be sacrificed by the Small-pox, and the contagious poison which is spread among children by its inoculation; for we want inhabitants to defend this happy country, to promote its commerce, agriculture, and manufactures; and that no method of increasing its health and population is more effectual than a general inoculation of the Cow-pock, is the confirmed judgment of

THE AUTHOR.

London, July, 1805.

The following Account of the SWEATING SICKNESS *in England, is extracted from "Nichols's Antiquities of Leicester."*

"THIS was the last visitation of this extraordinary malady, which the learned Dr. Friend justly calls something very remarkable and wonderful: a distemper, which was never heard of before in any age or nation; and which, after returning now and then for the space of some years, has ever since entirely disappeared. It originally was a native of our own island, and upon this account it is not so strange that it should be the most accurately described by one of our countrymen, the great and learned Dr. Caius. It began at first in 1483, in Henry the Seventh's army, upon his landing at Milford Haven, and spread itself in London, from the 21st of September to the end of October. It returned here *five* times, and always in summer, first in 1485; then in 1506; afterwards in 1517, when it was so violent, that it killed in the space of three hours; so that many of the nobility died; and of the vulgar sort, in several towns, half often perished. It appeared the fourth time in 1528, and proved mortal then in the space of six hours. Many of the courtiers died of it; and Henry the Eighth himself was in danger.

In 1529, and only then, it infeſted the Netherlands and Germany; in which laſt country it did much miſchief, and deſtroyed many; and particularly was the occaſion of interrupting a conference at Marpurgh between Luther and Zuinglius about the Euchariſt. The laſt return of it with us was in 1554. In Weſtminſter it carried off 120 in a day; and the two ſons of Charles Brandon, both Dukes of Suffolk, died of it. At Shrewſbury, particularly where Dr. Caius reſided, it broke out in a very furious manner. The deſcription he gave of it is terrible, like the plague of Athens. He very properly calls it a peſtilent contagious fever of one natural day. The ſweat itſelf he reckons only as a ſymptom or reaſon of this fever. The manner of its ſeizure was thus: firſt, it affected ſome particular part, attended with inward heat and burning, unquenchable thirſt, reſtleſſneſs, ſickneſs at ſtomach and heart (though ſeldom vomiting,) head ach, delirium, then faintneſs and exceſſive drowſineſs. The pulſe quick and vehement, and the breath ſhort and labouring. Children, poor and old people, leſs ſubject to it. Of others, ſcarce any eſcaped the attack; and moſt died. In that town, where it laſted *ſeven* months, periſhed near a thouſand. Even travelling into France and Flanders they did not eſcape it: and, what is ſtrange, even the Scotch were free, and the Engliſh only affected, and foreigners not affected in England. None recovered under twenty-four hours. At firſt the Phyſicians were much puzzled how to treat it; the only cure was to carry on the ſweat, which was neceſſary, for a long time; for, if ſtopped it was dangerous, or fatal. The way, therefore, was to be patient, and lie ſtill, and not to take cold. If nature was not ſtrong enough to do it, art ſhould aſſiſt her in promoting the ſweat, by cloths, medicine, wine, &c. The violence of it over in fifteen hours; but no ſecurity till twenty-four were paſſed. In ſome there was a neceſſity to repeat the ſweating; in ſtrong conſtitutions *twelve* times. Great danger to remove out of bed; ſome who had not ſweated enough, fell into very ill fevers. No fleſh in all the time; no drink for the *firſt* five hours;

for in the *seventh*, the distemper increases; about the *ninth* delirium; sleep to be avoided by all means. It appeared by experience, as the Lord Bacon observes, that this disease was rather a surprise of nature, than obstinate to remedies, if it were in time well. For, when proper care was taken, the patient generally recovered." Dr. Friend's History of Physic, part ii. p. 333-336; Dr. Kaye's account of this sickness, intituled "De Ephemerâ Britannica," was published in 1556, and very neatly reprinted at London in 1721, 8vo. The dedication o Anthony Perrenot, Bishop of Arras, is dated Jan. 11, 1555. To the first edition the author subjoined, Galen's two books, "De Libris propriis," and "De Ordine Librorum suorum;" and Hippocrates's book, "De ratione victûs in Morbis acutis." Dr. Kaye describes it as a new, strange and violent disease; for when it attacked any man, he either died or escaped within nine or ten hours; if he slept, to which all were then naturally inclined, he died in six hours; and if he took the least cold, in three. It raged among men of the strongest constitutions and years; few aged men, women, or children being subject to it, or dying of it; but which was most strange, no foreigner who was then in England died by it, though 400 Frenchmen were attending the ambassador where it was hottest. The English, as singled out, sickened and died of it in other countries, without any danger to the natives. It was first known among us in the beginning of the reign of Henry VII. but was not so violent as now: 800 persons died of it in a week in London; and in a few days about 960 at Norwich. Blomefield's Norwich, p. 131, 756; Baker, p. 341; Holinshed, p. 764, 794; Stowe, p. 486. It did not visit Norwich, in 1517, 1528, or 1529. It began Sept. 21, 1483, and lasted to the end of October. It seized the parties with a violent *burning sweat*, which so violently distempered the blood with ardent heat, scarce one in one hundred escaped alive; for which account it was also called the *dead sweat*; for all were inanimate as soon as it took them, or very soon after yielded up the ghost; and what was worse, as it appeared

afterwards (Hall. fol. 111, 6 Hen. VII.) the same persons were liable to the same disease again. (Bromefield, p. 26) Baker says, the remedy found was, that if one was taken with it in the day, he was presently to lie down without talking, and never rise of twenty-four hours; and if in the night not to rise at all during that time; and neither eat or drink, or at least but moderately. "In the same yeere a new kind of sickness invaded suddenlie the people of this land, passing through the same from the one end to the other. It began about the one and twentieth of September, and continued untill the latter end of October, beinge so sharpe and deadlie, that the like never was heard of to anie man's remembrance before that time; for suddenlie a deadlie burning sweat so assailed their bodies and distempered their blood with a most ardent heat, that scarce one amongst an hundred that sickened did escape with life; for all in manner, as soon as the sweate tooke them, or within a short time after yielded the ghost. Beside the great number which deceased within the citie of London, two maiors succeslivelie died within eight daies, and six aldermen. At length by the diligent observation of those that escaped (which marking what things had doone them good and holpen to their deliverance, used the like againe, when they fell into the same disease the second or third time as to diverse it chanced) a remedie was found for that mortal maladie, which was this: if a man in the day time were taken with the sweat, then should he straight lie down with all his clothes and garmentes, and continue in his sweate four and twentie hours, after so moderate a sort as might be. If in the night he chanced to be taken, then should he not rise out of his bed for the space of four and twentie houres, so casting the clothes that he might in no wise provoke the sweate; but lie so temperatelie, that the water might distill out softlie of the owne accord, and to abstaine from all meat, if he might so long suffer hunger; and to take no more drinke, neither hot nor colde, than would moderatelie quench and asswage his thirstie appetite. Thus in lukewarm drinke, temperate heate, and measurable cloaths, manie escaped. Few which used this order (after it

was found out) died of this ſweat. Marie one point diligentlie above all other in this cure is to be obſerved, that he never did put his hand or foot out of the bed to refreſh or coole himſelf, which to doo is no leſſe jeopardie than ſhort and preſent death. Thus this diſeaſe, comming in the firſt yeare of king Henrie's reigne, was judged (of ſome) to be a token and ſigne of a troublous reigne of the ſame kinge, as the proofe partlie afterward ſhewed itſelf." Hollinſhed, p. 763, copied by Grafton, p. 857. Hall ſays, "it was ſo ſore, ſo paynfull and ſharp that the lyke was never harde of to any mane's remembrancie before that time. For ſudenly a deadly and burnynge ſweate invade their bodyes and vexed their blood with a moſt ardent heate, infeſting the ſtomach and the head previouſly; by the tormentyng and vexacion of which ſicknes, men were ſo ſore handled, and ſo paynfully pangned, that if they were layed in their bed, beyng not liable to ſuffre the importunate heat, they caſt away the ſhetes and all the clothes lying on the bed. If they were within apparell and veſtures, they would put off all their garmentes even to their ſhertes. Others were ſo drye, that they dranke the colde water to quenche their importune heat and inſaciable thirſt. Others that coulde or at the leaſt woulde abyde the heat and ſtyntche (for in dede the ſweate had a great and a ſtrong ſavoure) cauſed clothes to be layed upon them, as much as they coulde beare, to dryve out the ſweate, yf it might be. All in maner, as ſoon as the ſweate toke them, or within a ſhort ſpace after, yielded up their ghoſt. When any perſon had fully and completely ſweate twenty-four hours (for ſo long did the ſtrength of this plague hold them) he ſhould be then cleerly delyvered of his diſeaſe; yet not ſo cleane ryd of it, but that he might ſhortly relaps, and fall agayn into the ſame evyll pyt; yea, agayne and twyſe agayne, as many one indede dyd, which after the third tyme dyed of the ſame. This ſtrange and unknown diſeaſe, at that tyme, vexed and greved only the realme of England in every toune and village, as yt dyd diverſe tymes after. But lv yere after yt ſayled into Flaunders, and after into

Germany, where it deſtroyed people innumerable for lack of knowledge of the Engliſh experience." Hall, f. 111. It came again 22 Hen. VII. (Ib. f. iix) 9 Hen. VIII. "this malady was ſo cruell, that it killed ſome within three houres; ſome within twoo houres; ſome merry about diner, and dedde at ſupper. Many dyed in the kynge's court; the lorde Clinton, the lorde Grey of Wilton, and many knightes, gentlemen, and officers. For this plague Mighelmas terme was adjourned; and, becauſe that this malady continued from July to the middle of December, the kyng kept himſelf ever with a ſmall compaignie, and kept no ſolemnne Chriſtmas, willing to have no reaſon or feare of infeccion. In ſome one toun halfe the people died; and in ſome other the thirde parte, the ſweate was ſo fervent and infeccious (f. lxiii.) 20 Hen. VIII. in the end of May it began again at London, and went through the realm. Many died within five or ſix hours; divers in the court, among them, Sir Francis Poynts, who was embaſſador to Spain. The king and court remained at Tittenhanger, which was daily purged with fires and other preſervatives. F. clxxi." P. 891. [*Britiſh Critic.*]

NEW PUBLICATIONS.

MEDICAL THESES, selected from among the Inaugural Dissertations, published and defended by the graduates in medicine of the University of Pennsylvania, &c. &c. By Charles Caldwell, M. D. Editor of the work.—Philadelphia.—T. & W. Bradford, 1806. 8*vo. pp.* 396.

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III. GLOVER on Digestion.

IV. HODGES' Experiments and Observations on the Absorption of Active Medicines into the Circulation.

V. QUACKENBOS on Dysentery, by an induction of facts from which the Mitchillian Doctrine of Pestilential Fluids is illustrated.

VI. JACKSON on External Applications.

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IX. COCKE on the cause of the Extensive Inflammation, which attacks Wounded Cavities and their Contents.

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XIII. DANGERFIELD on Cutaneous Absorption.

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2. An Experimental Inquiry into the Modus Operandi of Mercury, in curing the Lues Venerea.

3. Experimental proofs that the Lues Venerea, and Gonorrhoea, are two distinct forms of disease.

A Treatise on the management of Female Complaints, and of Children in early infancy. By Alexander Hamilton, M. D. Revised and enlarged by his son, Dr. James Hamilton, Professor of Midwifery, in the University of Edinburgh, &c.—Philadelphia—Dobson.—pp. 319.—*Price* 1 *dollar.*

ERRATUM.

Page 254. line 16. for *pretend to teach*, read, *pretend to treat.*

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